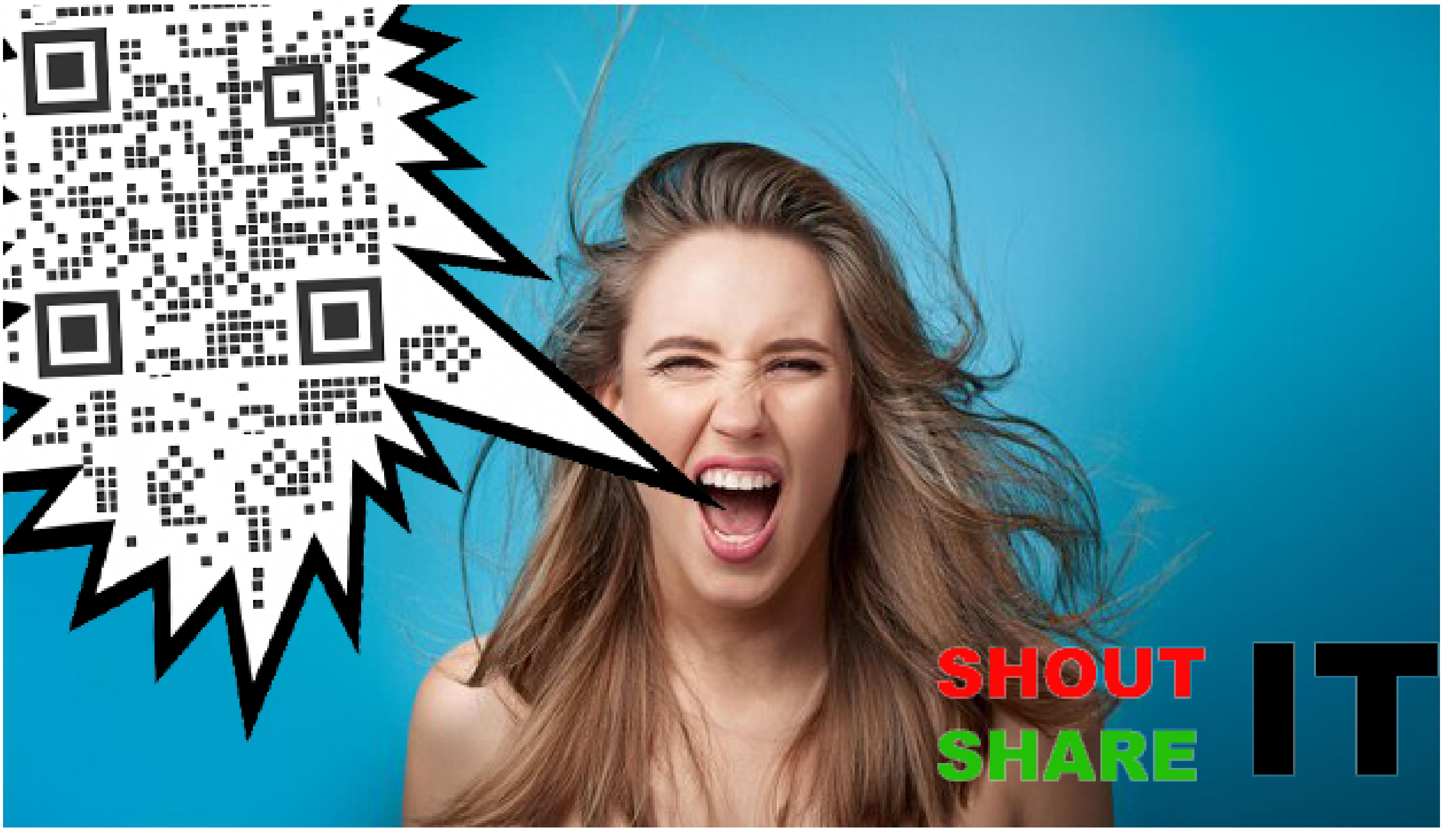
Bird Notes

VOL. V.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BIRD NOTES.

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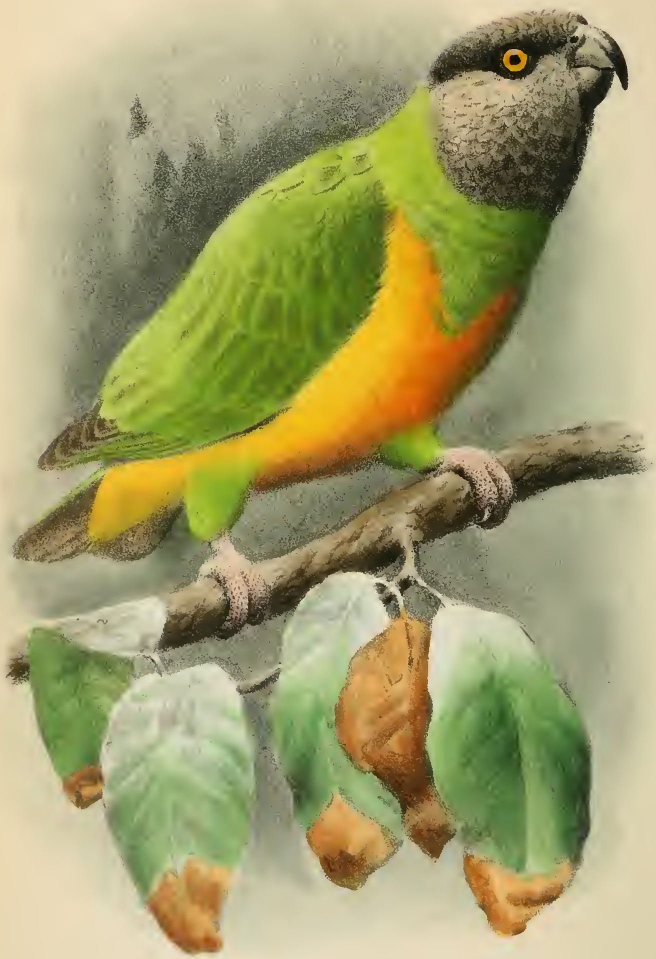

H. Goodchild, del et lith

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SENEGAL PARROT.
Pŏeocephalus senegalus.

From a living specimen in the possession of Miss C. L. Collier.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Senegal Parrot.

(Pœocephalus senegalus).

By Miss C. L. Collier and W. Geo. Creswell.

Some few summers ago, as I was driving through Bibury, I took the opportunity of calling on the Hon. and Rev. Canon Dutton in hope of seeing his birds. He was unfortunately out, but a maid showed me his aviaries, and also some parrots which were in the house. But what pleased me most were some parrots, who appeared to live all day in a large tree on the lawn. Among them were two Senegals, who seemed tame, as they allowed me to put my hand close to them, although they would not come to me. The maid said they would not come off the tree except for Mr. Dutton, with whom they were quite fearless. Underneath the tree two beautiful little Pomeranian dogs were gambolling, and there were also one or two cats. It was in fact quite a happy family, and one of the prettiest sights imaginable.

My personal experience of Senegal Parrots, however, is entirely confined to the one whose portrait adorns this number of *Bird Notes*. What I have to say therefore is of the nature of a biography, and in no sense written from a scientific point of view. I note, to begin with, that my Senegal is one of the hardiest and healthiest of birds, and that during over seven years I have never known him to be ill. Last year, during his moult, he lost his appetite for about a week, but he never lost his spirits or his activity in any way, so I was not seriously alarmed about him, but of course changed his food. When he came into my possession he was absolutely tame, and, I believe, only a few months old. He will go to anyone who will take him, and does not know what fear of any human being means. He has a very marked preference for what a friend of mine calls "the weaker sex," and the instant a man comes near him he tries to attract his attention. To some men in particular he manifests such intense love that I have feared his excitement would make him ill. Quite recently he got out of his cage, which was outside the window, flew on to the front garden railings, and when a passing policeman stopped to look at him, he jumped on to his shoulder, to use the man's own words, and sat there delighted. I should like to have seen that very stalwart man coming in at the gate with the little creature on his shoulder. That is the second time that he has been restored to me by a policeman. But the first man, although he arrested him, was afraid to take him into custody.

My Senegal has a very individual character of his own, and shows great determination and persistence in trying to get his own way. He is extremely affectionate, but has a very hasty temper, and if spoken to harshly, gets at once into a rage, which is, however, over in a minute. He understands all I say to him, and makes me understand everything he wants either to do or to have. And that is generally the same thing every day at the same hour. For example, he is accustomed to have sopped toast every morning at breakfast, and if I do not give it to him at once, he calls me by name until he gets it. He will learn to say anything he hears a few times, and imitates the cries of all other creatures, including those of street urchins. We have had several cats since I had the bird, and he never shows any fear of them, and more than once he has played about on the floor with a cat nearly full-grown. On one occasion the cat upset the table on which his cage stood, apparently without upsetting in any way the mental equilibrium of the parrot, who was found quite calm and told us he was all right as well as he could. He knows those who are not afraid of him, and they can do what they like with him, but I never allow him to go close to those who are afraid of him, as he is likely to bite them. Of course he has bitten me many times, on occasions when I crossed him, but he has never offered to bite a man or anyone who is a stranger to him.

He loves to be out of his cage, and in the evening after daylight is gone, will sit for hours on a little stand, or on my shoulder. In the day he wants to be biting my hair or dress, so I cannot have him on me very much. He never seems to feel the cold weather, and summer and winter his cage stands by an open window. I was rather surprised to be told by a keeper at the "Zoo." that three fine specimens of the Senegal Parrot had died, not long after they had been placed there. However, that was some years ago, and I hope that under the improved conditions those they now have will flourish. I think that if I had never owned the "Ideal Parrot" of whom I wrote some years ago, I should consider it impossible to have a more interesting and lovable pet than my Senegal. C. L. Collier.

Of all the different Parrots of various families and species which I have possessed, from the initial Ring-necked Parrakeet in 1876 to the numerous, and in many cases often changing examples in later years, the Senegal so far appeals the most strongly to such measure of affection as I am capable of shewing. Indeed I am bound to say that I feel a good deal of gratitude to Miss Collier's charming little pet, not only for his kind reception of me when I saw him at the Crystal Palace Show of 1903, but also for that meeting having been the direct cause of my now having my own little "Jobo" as a friend. For seeing how captivated I was by the delightful manners of the little Dum-dum (as this bird is called by Europeans on the Coast), my friend Dr. Hopkinson, as he afterwards told me, determined to bring me one on his next return on leave from Gambia. And so he did; landing here on the 20th of last April, he immediately wrote to me to my surprised delight that one would reach me in a day or two. On the 25th it arrived,—a vicious little rascal who fought and bit, as only a Parrot can, whenever my hand approached it.

In a few days, however, sufficient confidence was established between us to allow of a ground nut being taken from my fingers between the bars of the cage, though immediately afterwards a sledgehammer blow and a pincer like nip would be my reward. The next stage, that of allowing me to gently stroke the culmen of the beak with my finger tip, was longer in being arrived at, but was then of only short duration, for almost directly afterwards I was permitted to caress the head itself. All animosity was now at an end; before long I could put my hand into the cage, and stroke wings and back to the answering accompaniment of little cat-like purrs, betokening the most profound contentment and happiness. To-day a humanized bantam Parrot rides about the house, perched on my finger and talking the while in a little endearing language that both of us well understand. Or else he may be found in my pocket, or nestling under my coat collar, or perhaps against my cheek, when every now and then I feel a little wet tongue licking me, and sometimes there comes a gentle tweak from a beak which could indeed do much more if its owner wished. At the present moment the little fellow is on the table close to my hand, watching my pen, and trying to tempt me to a game of pretended fighting with many contortions and mock heroics. If at any time during such little games he is somewhat frightened, or thinks he has had enough of it, he flies on to my head, rather to my discomfort I must confess, because if there is one thing that can be practised better by a professional than by an amateur, it is the art of hair-dressing. His talking accomplishments are as yet not very marked, for although he has the constant companionship of my Rosy Cockatoo, the most extensive linguist I have ever known in the Parrot tribe, his acquirements from this able teacher are confined at present to calling the cat and dog, and to giving an exact reproduction of the whining of the latter animal when shut outside the door.

From this joint account our readers will have probably formed the opinion that the Senegal is one of the most delightful avian pets in existence, and I should say that generally speaking they would be right. But all are not as the two which have so endeared themselves to their respective owners. Shortly after Dr. Hopkinson's kindness in giving "Jobo" to me, he added to my obligation by sending me another specimen of a presumed opposite sex, which after seven or eight months is still nothing less than a perfect savage. Although full of fun and humour, as evidenced by its numberless pranks in its cage, it gives never the ghost of a chance of anyone being able to make even the earliest advances towards a mutual understanding. It is but seldom indeed that it will even take a tit bit from the fingers, and when it does it generally bites the hand that feeds it.

In Vol. III. of *Bird Notes* Dr. Hopkinson gives us a few interesting particulars as to the wild life of this bird. In Gambia, where it is very common, it is constantly to be seen flying about in flocks 20 or 30 strong, and feeding largely on ground nuts when these are in season. Although generally so tame and confiding in captivity, they are exceedingly shy and wary at liberty, and when feeding on the ground always post a sentinel in a commanding position to warn the flock of impending danger. Their nesting time practically coincides with the breeding season over here, since they breed from May to September, laying two eggs in a hole in a tree. W. GEO. CRESWELL.

Swainson's Lorikeet.

(Trichoglossus novæ-hollandiæ.)

By Miss Rosa Little.

Any lover of foreign birds who has kept Blue Mountain Lories, or to be more accurate—Swainson's Lorikeets, must have derived much amusement from watching their quaint ways. Personally I have found them more interesting than any other birds I know, and have spent hours watching them at their games.

A pair I had for nearly two years (the hen, alas, died a month or two ago) were the most devoted lovers, but the cock bird was master, and would allow no liberties from his wife. She was never allowed to bathe until he had completed his morning dip; if she ventured near while he was in the water he would fly up and peck her, screaming all the time, and drive her right to the other end of the aviary. And what a bath he would have! He just revelled in it. I have seen him lie flat on his back in the water, kicking his legs in the air, and then roll over and over again. Even after he had nearly dried himself, the temptation of just another plunge would be too much for him, and in he would go once more. When he had quite finished Mrs. Lorrie was allowed her turn, but she never was so vigorous over her bath; perhaps she did not fancy the rather dirty water left for her use. Another quaint habit of theirs was to lie side by side in a box which I had put for their use as a nest. They never roosted at night, but always retired to their box at the bottom of the cage. The hen, poor thing, died of some growth, which had been increasing for months, but which did not seem to give her any pain. The end came quite suddenly. One afternoon I found her dead in a corner of the cage, while her mate was lying cuddled beside her. It was a most touching sight, for he kept calling and cooing to her in a soft little voice as though he knew something was wrong, and could not understand her taking no notice. When we put in a net to remove her he fought with all his might at it, and it was with the greatest difficulty we could get her away, and when we did he screamed for quite a long time. For some days he would hardly touch food, and he would get right away to the top of the cage when anyone went near. I feared he would starve himself to death, and sent all over the country to find another hen. Eventually I had the offer of a pair, cock and hen, and as I had ordered a hen from another source I decided to have the lot, thinking the four would live together. The pair arrived before the hen could be sent, and were, I should think, much younger birds than mine, for they were smaller and not so tame. Almost at once the cock started having fits, and, thinking him almost dead, I took the hen away and placed her with my old bird. Then she started having fits, and I put her back to her own mate, who had in the meantime recovered, but I had countermanded the second hen, so my old bird was again left all alone. To cheer him I put the new pair near him, and they talked to each other in the most friendly way till I thought I might venture to put all three together. I did so, when alas for the fickleness of the hen bird, she at once left her own mate for my old bird, and together they turned on the young cock, and would I think have killed him had we not gone to the rescue; so now the young bird is alone and seems very sad.

I have been told that these birds often die in fits, and therefore people are afraid of keeping them, but I have had my old bird over two years, and he is very flourishing, never having ailed all the time. The other two seem to have quite got over their fits and are doing well. I showed this pair at Twickenham bird show a week or two before Xmas, and they took first prize in the only class for foreign birds that was not cancelled.

Some Reminiscences of my Early Days of Foreign Bird Keeping.

By J. A. Swan.

(*Continued from Vol. IV. p.* 240.)

And now I must confess my memory fails me with regard to the order in which my next birds were purchased, for I began to launch out into other and larger cages, thereby adding as a matter of course to the collection. So I will just mention any particulars which occur to me as I write, and which I think likely to be of interest.

It was about this time, I believe, that I first directed my attention to the Weavers, a family which held me in thrall for many years, in fact until the more delicate Insectivorous birds in their turn began to fascinate me.

The first member of the group was a Yellow Weaver, and I made my eyes ache by the anxious longing with which I looked for the change of plumage. The bird turned out to be a hen, so had it not died after a few years, and had I not meanwhile grown tired of watching for the colour which did not come, I might have been looking still. Of course I could easily have bought some birds in colour, but it went against the grain to pay six or eight shillings for a bird which a few weeks earlier I could have had for a florin. So I kept to my out-of-colour selections, and to the best of my recollection this first Weaver was the only one which turned out to be a hen, out of all the many I afterwards bought. If ever an old saying was open to criticism it is that one which tells us that comparisons are odious, regarding it, of course, purely from the avicultural standpoint. For it is only by reading, and above all by actually comparing different birds, that one is able to see the distinctive markings which indicate the male sex of the Weavers when out of colour. The eye streak, for instance, is a trifle wider and longer, and the least bit deeper in colour; the flight and tail feathers have the black and buff more defined; the beak will sometimes have a slight shade of dullness over it, or perhaps just the tip may be black; the breast and colouring generally will have a more glossy and "live" appearance; and, above all, there is that almost indefinable air of boldness and assertiveness in the carriage of the male bird which enables one to decide at once, where other signs perhaps incline one to doubt.

I have kept most of the Weavers commonly imported, and amongst them the Yellow, Orange, Grenadier, Crimson-crowned, Napoleon, Madagascar, Comoro, and Red-billed occur to me. "They are all exceedingly spiteful birds and harass and attack all others with which they are kept." *Vox populi*, *vox dei* —so it *must* be right! Personally—and as these are reminiscences I must speak personally—with one exception, I found them nothing of the sort. True they did occasionally snap at other birds, but not sufficiently often to cause me to brand the entire family as being bad tempered, for other species get irritable at times and behave in a manner worthy—or should I say unworthy?—of the character of Weavers themselves. And they did not worry and harass other birds. Neither did they break the legs of their companions, nor brain them, nor disembowel them, nor hang, draw, and quarter them. It is strange I know—from a popular standpoint—but it is nevertheless a fact. *Why* they did not I cannot say. The only excuse I can offer on their behalf is that they were made wrongly.

The exception I have referred to did attempt to tyrannise over his companions at first—(I noticed they all had a slight tendency to do the same until they had settled down)—but even he was open to wisdom, though only a Weaver. I did not intend that his bad behaviour should make the other birds miserable, so having caught him, I placed him in a small German travelling cage, and hung it up in a top corner of the general living cage. There he stopped for a week, and it was a very quiet and subdued Crimson-crown which meekly hopped out when the bars were raised at the end of that time. He could not alter his manner altogether though, for after a time, when the seven days had passed into an uneasy remembrance, I caught him at his games again. This time it meant a month in solitary confinement, with all his erstwhile companions hopping around and enjoying themselves, and at times actually perching on his prison! It was a permanent cure, however, for I never had to punish him again.

As an antithesis to this, let me instance a very pleasant little friendship which sprung up between a Napoleon and an Orange Bishop. They seemed only happy and contented when in each other's immediate company, and it was somewhat unusual to catch them apart. At night they slept close together, and during the day would both work on the same nest building operations. When they were tired of this they played follow-my-leader! Away would go the Orange Bishop with Master Napoleon gravely hopping after him. If Master Bishop peered inquisitively at anything that caught his eye, then so did the Napoleon; and if it was a tearaway fly then there would be commotion indeed! Backwards and forwards the Orange Bishop would dash, and helter skelter went Master Napoleon after him. Oh! it was a game—for these two. The other birds tried to get out of their way and held on tight, but were sometimes ignominiously bowled over.

It is hardly necessary for me to say much respecting the wants of Weavers generally. Plenty of seed and water will satisfy them, and they thoroughly enjoy grass in the ear and mealworms. Bathing they delight in like most birds, and sometimes soak themselves and everything else within reach, three or four times a day. The various changes of plumage are well known, and make one almost incapable of believing that the bird in its gorgeous summer dress is the same one which a few short weeks previously was an insignificant brown-looking creature.

Not the least wonderful thing about Weavers is their marvellous habit of building nests all over the cage. Give them hay, straw, bass, string, hair, or other similar substance, and they will set to work far more energetically than the average workman. Some Weavers—the Red-billed particularly—seem to have a perfect passion for building, and one bird will at times have several nests going at once. I gladly encouraged my birds to build, for it gave them an interest in life and something to occupy their minds. And to see a small bird twisting and bending a piece of hay first this way and then that, anon stopping and peering at some particular piece that required special thought, with the funniest I-wonder-how-I-can-do-that expression, was at times sufficient to bring a smile to the most pessimistic of mortals.

(*To be continued.*)

The Winter Housing of Tanagers in an Aviary.

By Claudine Anningson.

Up to the month of May of 1905 I had always kept my soft-billed birds in a large wire cage, but one day I went into my big birdroom, where I kept my big birds, and as I entered, the sun was shining brightly on the cage that contained several species of Tanager—the Scarlet, Superb, Blue and Olive. I stood gazing for some little time, thinking how lovely they looked, and the shimmer of all their beautiful colours induced me to say to myself, "If onlyI dared trust them in my big aviary, what a grand sight it would be to see them flying with my other birds." Well, the pretty picture I imagined made me take a bold step. I called to my old servant—the woman who always helps me with my birds—and told her that I had resolved to flight all my Tanagers in the big aviary. My maid tried hard to dissuade me, but all to no purpose—my mind was made up. I forthwith gave the Tanagers their liberty, not without misgivings, I confess; nor should I care to say how many times that day I went to my aviary to see what kind of a welcome the uninvited strangers were receiving. Much to my satisfaction, the intrusion did not seem to be resented by the regular denizens of my feathered city, save perhaps by a red Virginian Cardinal, who looked askance at the male Tanager, the vivid colours of which possibly raised a feeling of envy in his breast, and caused him to look with doubting eyes at the graceful little form of his own mate, whose loyalty to himself, I fear he thought, might be alienated by the brighter plumage of his rival. But the Tanager was true to his old love—perforce true, methinks, for his wife took good care to allow no movement of his to escape her vigilant eye: wherever her husband flew, she flew too, much to the satisfaction and peace of mind of the somewhat disconsolate Cardinal. And so peace and harmony prevailed, a wee bit to my surprise, but certainly much to my gratification.

About the second week in September, the evening air of autumn donned its chilly garb, and I thought that the sooner I caught my Tanagers and housed them in a warmer, but more confined house, the better: so, armed with a carrier-cage and a net, I one morning entered the aviary, there to find all the birds so happy together, so joyous in their liberty and companionship, that I paused upon the eve of my purpose; whereupon, seeming to divine the reluctance of their would-be jailer, they all burst into song, such glad and glorious song, that I resolved to abandon my intention and accordingly retreated, my exit being hailed with such a chorus of delight that I in no way regretted my determination to let them continue in liberty.

Now, since I had decided to no more make my Tanagers captives, I had to devise some means of ensuring them warmth and shelter; this I did by placing small bundles of hay in the pea-sticks, and by nailing the flat side of some old straw-hats, with small holes cut in the crowns, to the aviary walls, thus enabling the birds to get inside the hats at night for warmth, whilst the hay in the pea-sticks effectually sheltered them from cold and draught in the daytime. This plan has succeeded admirably, and even at this late period of the year—December—my birds are still in the aviary, and I have never seen them in better health or brighter plumage. Here let me state, in passing, that I have found Dr. Creswell's assertion (made in the pages of *Bird Notes* some time ago) that any birds could be trusted in an aviary, if they were protected from cold at night, to be quite justified by my experiment in this direction, so perhaps some of my bird keeping friends will now take courage, and embark on what I have proved to be a successful and pleasing venture.

I will conclude this brief article by saying that I give the Tanagers, twice daily, mealworms, in addition to soft food and fruit, which alone I hardly thought sufficient to impart the warmth requisite to their proper nourishment and well-being during these cold and cheerless days of winter.

The Blue-bearded Jay.

(*Cyanocorax cyanopogon*).

By WILLIAM BAMFORD.

Some eight or nine years ago, as one day I was visiting the bird shops of Manchester, looking for anything new in the birdy line, I came across a cage with three strange birds in it. Their general appearance as to colour and shape was like our English Magpie, though they were considerably smaller in size. Their bright and alert ways made me quite lose my heart to them, but as it was time to catch my train I reluctantly had to leave them. For two days I broke the tenth commandment, but being again in Manchester on the third day, I could not resist going to see if the birds were still unsold, and on finding them still there I became the possessor of one of them without a moment's delay. The price I paid was ten or twelve shillings. On getting my treasure home I at once turned him out into a large cage, and took stock of him with that feeling of pride and pleasure, which all aviculturists feel when they turn out a fresh bird, especially if it is one they have never kept before, into its new cage. The bird was very tame, and seemed quite at home.

His plumage was as follows: head and chest black; back, fawn brown, nearly deepening into black on the flight and tail feathers; underparts, nape and tips of tail feathers white. A bright blue spot over the yellow eye and a dark blue streak from the gape of the mouth gave the bird quite a gay appearance. The beak and legs were black.

What however was to me the most striking point about the bird was its black crest which he was continually raising up and down as he hopped about. This, instead of being erected from the base of the bill, like that of cockatoos and most other birds which raise and depress their crests, was raised at a perfect right angle directly over the eye, giving the bird an especially sharp and quaint appearance. I searched my library through, and at last found, in the Royal Natural History, a bird whose description tallied very nearly with my bird, under the name of Urraca Jay (*Cyanocorax chrysops*). The woodcut which accompanied the description was similar, with the exception of the crest, which seemed too rounded and big, but this I thought might be due to the figure being drawn from a stuffed and not a living bird.

Till two years ago I thought my bird belonged to this species, but on opening my *Avicultural Magazine* in May 1903, I was pleased to find a facsimile coloured portrait of my then, sad to say, late lamented Jay, under the name of the Blue-bearded Jay (*Cyanocorax cyanopogon*). These two birds must be very closely allied, as the distribution of the markings seems exactly similar, and the only difference in colouring seems to be that the Urraca Jay has a purple black back, whilst that of the Blue Bearded Jay is brown. Whether the Urraca Jay has the purple streak from the base of bill and the peculiar crest I am unable to say, but perhaps some fellow member can enlighten us on this point, or any other differences between the two birds.

I fed him on an ordinary Thrush's mixture varied with boiled potatoes, and, as a treat, a few scraps of meat. I also handed over to his tender mercies all the mice I caught, and with which I was overrun at the time. These he would seize in his beak, and after flying up to the highest perch, would then proceed to tear to pieces and swallow them, holding them firmly on the perch by his powerful legs. Everything vanished except the skull and skin, the latter however being picked quite clean.

The only sound I ever heard him make was a squa-ak, which he used to utter when trying to attract my attention to give him some dainty. He lived for about twelve months, and never seemed to ail a moment. I kept him in a room without any artificial heat, and the cold never seemed to affect him in the slightest. One morning he was found dead, though the day before he was as lively as usual.

My present stock of birds is confined to a Grey Parrot, who is an excellent talker, but I live in hopes of being some day the possessor of numerous aviaries, which are stocked in my dreams with all manner of rare birds.

Editorial.

YELK OF EGG AND LEPROSY:—What would seem to be one of the most inscrutable problems assailing the pathologist is the complete elucidation of the natural history of leprosy. The fundamental reason for this difficulty lies in the fact that it has always been found impossible to cultivate the bacillus on any of the known media. In the case indeed of an apparently identical disease found in rats (a similar one to which I have also found in birds), "special "media have also been tried, such as a medium made "from rat's flesh, and a medium with the addition of a "rat's blood serum, but these have also failed to give "a growth of the bacillus. Many pieces of tissues "swarming with bacilli which have been left for over "a year on appropriate media still show the bacilli "staining well, but no growth has taken place." (Dr. Geo. Dean in *Journ. Hygiene*, Jan. 1905).

By using, however, one part of yelk of egg mixed with four parts of agar medium, Dr. Emile-Weil tells us (*Ann. de l'Inst. Pasteur*, Dec. 1905) that he has succeeded in propagating the leprosy bacillus for at least a short time. Growth begins on or about the fifth day and continues for about a fortnight or three weeks more, and then stops, not being renewable on subculture.

If then egg has such an invigorating influence as to make a bacillus live and reproduce itself for even three weeks, which by no other means can be made to do so for a day, we can gain from this some idea of its power in intensifying the vigour of the easily grown septic bacillus, and we can understand why Klein found his cultures grown under these conditions so much increased in virulence when using them for his experimental inoculations. We can see how it is that while more immune than seed eaters in the aggregate, as I have pointed out, a large number of our wrongly fed insectivorous captives die of septicæmia ; and we can see how a colony of Canaries can be induced to exhibit a rapidly fatal epidemic in the late summer and autumn.

While on this subject, I note that in *Canary and Cage Bird Life* of February 9th Dr. Butler says :— "The sample of yolk is certainly not satisfactory ; it

" has, as you say, an unpleasant cheesy smell which it " ought not to have. It might not hurt coarse feeding " birds, some of which will eat addled eggs with " pleasure, and be none the worse for doing so ; but I " would certainly not give it to delicate insectivorous " birds, and I believe it would be extremely dangerous " to feed Finches upon it, they being far more suscep- " tible to septic poisoning than soft food eaters."

As far as it goes this is a step in the right direction, and I congratulate Dr. Butler upon it. It indicates that he realises at last the existence of septic disease in both *insectivorous* and seed eating birds, that egg does have some special influence on the disease, and that he has set the seal of his approval upon my application to the various classes of birds of the biological laws affecting the question of comparative immunities. I have before me at the moment a letter of his which appeared in the first number of the paper above mentioned, in which he states that none of his insectivorous birds had ever died of septic enteritis, implying, though not actually stating, a medical man as his authority, and also the " expert opinion" at the Natural History Museum " at the hands of men who knew what they were about." I am not going to criticise any claims of the distinguished morphologists at the first Museum in the world to be considered pathologists, because they have none, and I am sure would be the very last to advance any : I merely wish to point out Dr. Butler's change of opinion and to compliment him on it. As the old Roman said, *Nihil est, quod longinquitas temporis efficere non possit.*

W. Geo. Creswell.

Some Notes on the Crystal Palace Show of 1906.

For some years foreign bird exhibiting has been more or less on the down-grade, and we were therefore agreeably surprised to find no less than one hundred and forty-four entries in the nine foreign classes. (We exclude the foreign Goldfinches and Bullfinches from the calculation.) This would seem to indicate a decided revival of interest in showing—but it may be partly due to the fact that there is now once again only *one* Palace Show in the year. The weather was cold, and the Show draughty and uncomfortable. The birds were staged in one of the transepts and screened by curtains, but there was no tent—consequently the light was better than usual, but we fear the draughts were trying to such of the exhibits as had come out of heated bird-rooms.

Passing over the three Parrot and Parrakeet classes (which contained many beautiful specimens, but little or nothing of special rarity or interest) and also the class for common finches, we come to the class for "Waxbills, Grassfinches, Weavers and Mannikins," which contained no less than thirty-seven entries, and must have given the judge a good deal of trouble. Mr. L. W. Hawkins secured the first prize with his lovely pair of Violet-eared Waxbills. The same exhibitor's Blue-breasted Waxbills were interesting. Yellow-rumped Finches, which last season were thought to be extremely rare, are now comparatively common, and there were three entries of them in this class.

We were pleased to see an example of that quaint little South African species the Dufresne's Waxbill (*Coccopygia dufresnii*) which but seldom makes its appearance on the Show Bench.

The class for Grosbeaks, True Finches, and Buntings made a good muster of eighteen. The first prize winner was a nice Black-headed Siskin. There were several pairs of Cuba Finches, some of the commoner and more attractive species and some of the Olive species—but none of them were in first rate order—in fact the *Phonipara* are not easy to keep in show condition, and in this respect they resemble Parrot Finches. (There is, however, a special reason for the difficulty in the case of the Parrot Finches, for they moult twice in the year.) Mr. Townsend had a good Yellow-billed Cardinal, and another exhibitor a rather poor pair of the same species. Mr. Frostick's Swainson's Sparrow is an uncommon show-bird, but is scarcely an ornament of the Show Bench. Mr. Howe's Alario Finch might, we think, have received more than the H.C. awarded to it—it belonged to the species, sub-species, or variety which exhibits a much greater proportion of white in its plumage than the ordinary kind does.

The class for Tanagers, Sugar-birds, &c., is always one of the most attractive, and it was rendered more than usually interesting this year by the presence of Mr. Hawkins' Malachite Sun-bird. It is open to question whether this apparently newly-imported bird deserved the first prize awarded to it. It was weak and sickly, and in no sense in show condition. We can understand and sympathise with the judge's reluctance to pass such a bird, but surely a prize should not be awarded for rarity *only*. We think that no exhibit which fails to attain a certain standard of condition should be considered eligible as a prize-winner. The second, third, and fourth prizes were awarded to Mr. Townsend for his Black-backed Tanager, Green Tanager, and pair of Blue Sugar Birds respectively. Mr. C. P. Arthur was V.H.C. for a "pair" of Green Tanagers which we took to be two hens. Two exhibitors had perversely entered Pekin Robins in this class.

The class for "All species not comprised in the above" was a good one, with fourteen entries. Mr. Hawkins again secured the premier position with his pair of Silver-eared Mesias, and also the second prize with his White-throated Ground Thrush. Mr. Dewhurst's Rufous-bellied Niltava was breathing badly, and had, we fear, caught a chill: though since the cage bottom was covered with cocoa nut fibre it is possible that it was suffering in the same way as the Wryneck whose case is detailed in *Bird Notes*, Vol. III. page 18. The rare species of Glossy Starling (*Calornis metallica*), exhibited by Mr. Townsend, deserved at least a card. There was a good Indian Blue Pie shown by Mr. Arthur. The class contained some Indian Mynahs (scarcely show birds, these), a Shâma, a Purple-headed Starling, and a few other birds of no special interest.

The class for Foreign Hybrids, which seems to have now become a regular feature of the Show, is always one which attracts a good deal of attention. The title adopted, "Any species Foreign Mule or Hybrid," is certainly a quaint one—but Show Committees always had their little ways, and, we expect, always will have them so long as Shows endure. It used always to be "Variety," now it is invariably "Species," but the compilers of the Schedule are obviously ignorant of the content of either term. After all, what does it matter! Here were a Redrump-Rosella Parrakeet, a Barnard-Yellow-naped Parrakeet, a Bicheno-Zebra Finch, a (so-called) St. Helena Seedeater-Grey Singing Finch and a Silverbill-Bengalese. We saw no reason to seriously question the correctness of the alleged parentage in any case except that of the St. Helena Seedeater - Grey Singing Finch, but this ugly little bird, with its dark chestnut back, must almost certainly have Alario Finch blood in it. It is a pity that this interesting class contained only five entries.

Review.

Our School Out-of-Doors, a nature book for young people. By the Hon. M. Cordelia Leigh. Cr. 8vo., cloth, 2/-. *T. Fisher Unwin,* 1906.

This is a book of some 150 pages cram full of facts, more or less disconnected and ranging over the very extensive field of natural objects which may present themselves to a person taking a fortnightly ramble from January to December by field and dale, hedgerow and covert, pond and rippling stream, not forgetting an occasional glance heavenwards.

From the preface it appears to have been written for the assistance of teachers in nature study, and at the end of each chapter is appended a set of questions designed to test the knowledge acquired by their young students.

The chief value of the book appears to lie in the use that may be made—by the teacher—of the multiplicity of facts presented, treating them purely as suggestions. If he follows the text itself only, he will run a very considerable risk of turning out a few prigs, but if he will take the trouble to take each fact and thoroughly explain the underlying reason, which is not by any means always done in the text, and then group them together, he may very well ground in his pupils, first a habit of observation, and secondly the habit of correctly reasoning thereon.

In this sense the book may be recommended. A good example of the bare isolated fact loosely given may be seen in the statement that "a carp may be frozen in a block of ice and survive the trial." No attempt is made to show that the fish to survive the trial must be only *imprisoned* in the ice. If the natural heat of the fish is insufficient to secure space for the gills to act, the fish will not survive, nor will it survive when it has exhausted the supply of free oxygen available in the water set free from the ice. A child cannot evolve this for itself.

We are pleased to note that the authoress points out that many kind-hearted people put food out in their gardens for the birds, but altogether neglect to put out water as well. The book contains a fair number of illustrations.

Post Mortem Report.

(*Vide Rules*).

NIGHTINGALE, cock. (The Hon. Mary C. Hawke). This bird had been ill a long time, and from having been very fat gradually got so thin that at the time of its death it was extremely emaciated. For some time previous to its death it had been holding up its right leg, and a slight swelling on the hock was seen to get larger.

External examination shewed the vent feathers to be matted together with dried liquid excreta. On opening the body the liver and intestines were found to be much congested, and in the substance of the liver were multitudes of minute caseous spots. The spleen was greatly enlarged, so much so that in order to be accommodated in the abdominal cavity it was towards the upper end doubled upon itself at slightly less than a right angle. (*Vide* the report on a Rock Thrush, page 20 of Vol. IV., and again on page 37, *ibid*). This enlargement was due to the coalescence of the cheesy nodules so characteristic of the advanced stage of Septicæmia. The hock swelling also proved to be a septicæmic deposit.

A lay member of the Council, who happened to be visiting me at the time, was much interested in the different stages of the examination, and made some comments on the very decided implications met with some time ago in certain papers to the effect that this disease does not attack insectivorous birds.

I may say that this Nightingale had been fed on yelk of egg.

[The owners of other birds sent to me have been communicated with by post.]

W. GEO. CRESWELL.

Correspondence.

AVIARY EXPERIENCES.

Sir,—I am extremely sorry to find by Mr. Acutt's letter in the February number of *Bird Notes* that he has lost "two-thirds" of his birds during the past year. My experience has been somewhat different, at any rate during the past nine months. Last Winter, that of 1904—5, my small collection of foreign birds was kept indoors, the temperature of the room never falling below 45°. In spite of the utmost care, three died of pneumonia, *viz.*, a St. Helena Seedeater, Nonpareil Bunting, and a Budgerigar, all of which had been from eighteen months to two years under my care.

Last Spring I carefully read the "Hygiene of Bird Keeping," with the result that I have tried the outdoor plan. Twenty-five birds were turned into an aviary facing South on the 10th of June last, and a few more subsequently. Up to this date, the 27th of February, all are in perfect health, with the exception of a hen Combassou which died, egg-bound, in October. A Cordon Bleu who seemed overcome with the cold one frosty morning, is now as well as ever. Birds reputed tender, like the Australian Grassfinches, are as sleek and lively as the Weavers and Java Sparrows.

I need hardly say that egg food is never used, only Indian, white, and spray millet, canary seed, with scalded ants' eggs about every other day and a few meal worms daily, mostly consumed by the Weavers and Indigo. Green food but very sparingly given during the cold weather.

Alfred Wheeler.

BIRDS IN A DRAWING ROOM.

Sir,—Having read a pleasant article in a recent number, called "A Bird's Day," I should like to say a little about some birds I keep, which may possibly interest some of your readers.

I have two cages placed in different windows in a good-sized sitting room; one cage containing two hand-reared cock Bullfinches, and the other two Canaries and a mule bird. At certain times during the day they are allowed their liberty in the room; and their great delight, as soon as ever their cage doors are opened, is to go straight to their friends' cage, for they seem to think that the food, which is really just the same, is much nicer in another cage than in their own. Another pleasure is to sit on the fender and warm themselves, also to pick coal from the box. Towards evening they all go to their own cages and to their own special perches. If the usual time for their liberation is allowed to pass by, and they hear my voice in the house, the Bullfinches set up their call-note until their doors are opened, when they dash out, fly round the room and then straight into the other birds' cage. I can always get them back with a little hemp seed. One of the Bullfinches escaped through the window one day, but was very pleased to come back for some privet berries, which they love. What they dislike most is to see their mistress in a new hat or fresh gloves; if she goes near their cage with anything on to which they are unaccustomed they dash about till she changes it, when they at once become quiet again. It is hopeless to put any flowers in the room where they are, as they pick them to pieces at once, and there are very few flowers they will leave alone; almost any sort of flowers seem nice to pull to bits. It is very pretty to see them hopping about on the floor and furniture, singing their various songs the while. One Bullfinch has learnt the mule bird's song. After they have spent a happy afternoon, picking at everything about the room, splashing in a soap dish of water put for them, singing their different songs, and doing a good deal of quarrelling, they retire to their own cages and so settle down for the night.

It is wonderful what a lot of cleverness there is in even a Canary's small head. "ROSELLA."

GANNETS ON THE BASS ROCK.

SIR,—On reading Mr. Goodchild's interesting paper in your December number I was carried back to my young girlhood, one of the pleasantest days of which was spent on that wild and desolate place, the Bass Rock. I do not know whether the Solan Goose, as we used to call the Gannet, is as plentiful there now as it used to be—Mr. Goodchild only making a passing mention of them—but at the time I speak of they existed in dense flocks of thousands, and we were firmly convinced by local tradition that the Rock was the only place in Britain where they lived and bred. Of course I know now that they exist on Lundy Island, Ailsa Craig, and some few other places.

We drove from Dirleton to Canty Bay to gather up the lovely wax-like little pink cowrie shells, which I believe are found just there alone of all the stretches of Scottish coast. After filling our baskets, we went off in a boat to the Rock. As we approached, the air was literally darkened by the immense flocks of "geese" disturbed by our nearing the island, and their discordant yells and screams were deafening. Before we came away we were induced to purchase for six shillings a goose, dead, trussed, and ready for cooking, the man assuring us they were "fine eating if hung a day or two till they were a bit tender." So in a day or two it was duly roasted, but during that process alone all in the house had pretty well enough of the bird without tasting it. Never shall I forget the smell of this savoury bird; it was fish, turpentine, train oil, and indeed everything else delightful that can be imagined. Windows, doors, and every possible loop-hole had to be opened to let the perfume escape. What was done with the dainty dish I forget. We were told that a large Club actually existed for no other purpose than to dine annually off this epicurean bird at the little inn, and that the members came from all parts to enjoy it!

A word on another matter, suggested by the remembrances of my early home before my travelling days began:—I wonder if the fisher-boys still bring round in the Spring or early Summer the beautiful "Kitty wee-ick's" eggs (pale blue with large black spots), and those of the Guillemots and Gulls. They were boiled hard and offered to the visitors at 1½d. each, and very good they both were to the palate.

I also remember the Peregrines when there was a pair on the "Bass;" there were also some near Braemar in Aberdeenshire, and other parts of Scotland in those days. One was given me once which a boy had shot, and well I rated him for killing it I remember. I have it stuffed somewhere still.

G. McAdam.

SEPTICÆMIA AND TUBERCULOSIS IN BIRDS.

Sir,—I should like to say a few words of comment on "The Story of Bird-Death," and first I may say, that having been for the past five years engaged in the study of medicine, I speak from the point of view of one acquainted with the latest developments of medical science, as well as in the capacity of a bird keeper. Your pathological description of septicæmia is so plainly written as to be perfectly intelligible to any decently educated layman of average intelligence; no medical man or veterinary surgeon of anything like recent training ought to be excused if, after reading your articles, he still confounds septicæmia with tuberculosis. And you have also made it perfectly clear that in different stages of the disease care should be taken not to confound it with various other diseases, as I am afraid is too often done.

I am very glad to see that other medical men have preceded me in the appreciation of your work, and when besides this, Professor Hewlett, one of our most able bacteriologists, is in agreement with you, surely those who have little or no bacteriological knowledge should regard this as a true recognition that your work is of the greatest importance in aviculture. I congratulate you, Sir, that you have had the courage to persist in your work all through the attacks which have been made so continuously upon you on all sides, and which to me are unexplainable, except that they are dictated by bigotry.

Your arguments against egg food appear to be sound, and I suggest that you publish your articles on "Septicæmia" in book form. That you deserve our thanks for what you have done for aviculture in more ways than one should be plain enough, even to those who persistently minimise your work.

J. E. R. McDonagh,
M.R.C.S., L.R.C.P., F.L.S., F.Z.S.

AN EPIDEMIC AMONG WOOD PIGEONS.

SIR,—I was much interested to see your Editorial Note in the Feb. number on Mr. E. Kay Robinson's clever exposure of the popular fallacy that birds are able to reason out the treatment of a broken bone. But my chief reason for writing to you is to ask your opinion on a matter which I see noticed in one or two numbers of Mr. Robinson's paper. I allude to the fact that there has been an epidemic of fatal disease among Wood-Pigeons characterized by a waxy growth in the throat, and that a gamekeeper writing in *The Country Side* says it is caused by the birds eating beech mast. Is this correct? Having read your "Story of Bird-Death" I am inclined to doubt it.

"ENQUIRENS."

[You are right in your doubts; I am afraid I cannot acquiesce in the gamekeeper's etiology, but I will deal with the matter more fully in our next issue.—ED.]

SOME NOTES ON THE CONURES.

SIR,—Your article on the Golden-crowned Conure prompts me to make a few remarks on different members of this group which I have kept, and several of which I have found to be very desirable birds for an aviary. Generally speaking they are very bright and active, and soon become tame. Many of them will even take food from the hand without being in the least frightened.

I have kept the following species, and have found them to agree well together:—The Black-headed, the Golden-crowned, the Jendaya or Yellow-headed, the Golden-breasted, the White-eared, and the Cactus. They were all strong and hardy birds, and stood the winter cold very well in an outdoor aviary.

The Golden-crowned and the White-eared were extremely interesting in their habits. The first-mentioned pair were very fond of a Silky Cowbird named Jack. They used to get on a bough, with Jack sitting in the middle, while they took it in turn to scratch his head, a proceeding which he seemed very much to enjoy.

The White-eared are the smallest and I think the prettiest of all the Conures. My two were very funny little creatures. They were fond of getting on a perch in the sun, running up and down as fast as possible, and chattering and singing in their own particular way. Then they would suddenly turn a somersault, and appear in a different part of the aviary.

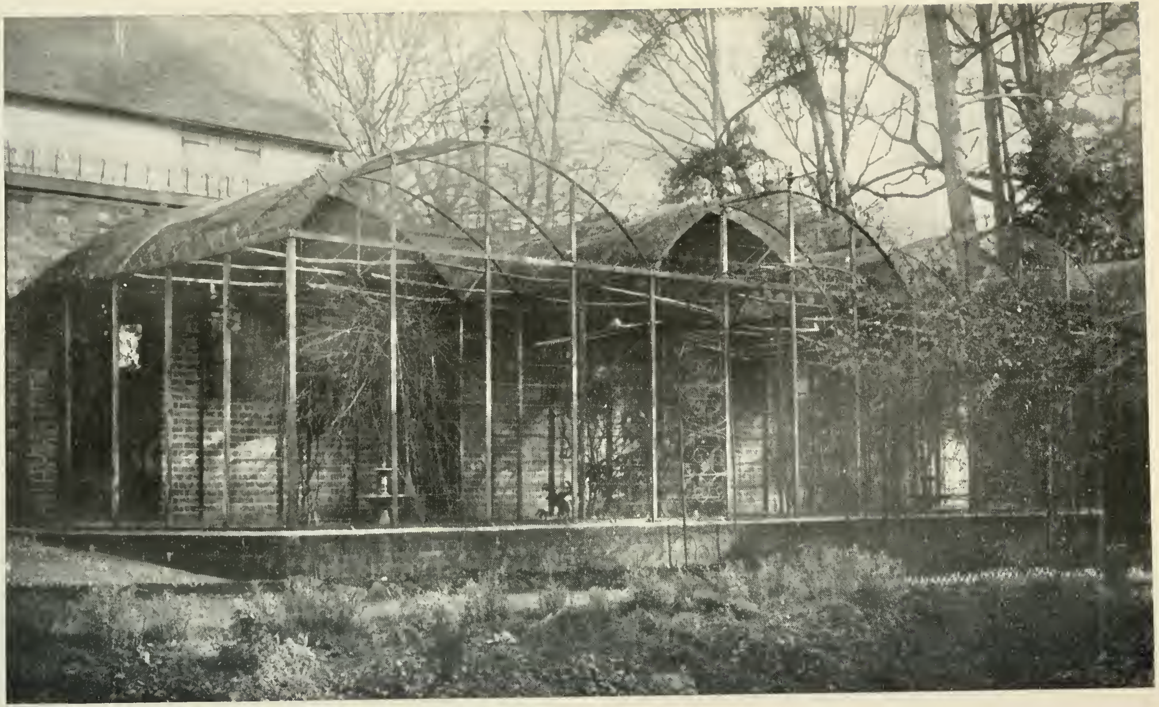
They all liked lettuce very much indeed, also fruit. I was in the habit of taking it to them about the same time every afternoon, and they were always looking out for me. Raspberries and strawberries were their favourite fruit. It was most laughable to see them each holding some up in one foot, while they were singing and making a great noise, with their faces covered with red juice.

The correct food for them is white and spray millet, canary, and a little hempseed, and some oats now and then. They do not care for wheat or dari. They should have plenty of water, as some of them bathe a good deal in the sunny weather.

Some people give the Conures a bad name, and say they are noisy and destructive, but I did not find them very bad in this respect. Of course they scream a bit sometimes, it is only natural for them to do so, but on the whole they are very pleasant and attractive birds, and well worth keeping.

In an evil moment I formed a wish to breed some Cardinals and Budgerigars, so I parted with my favourites as I had not room for all, but I have regretted it since, and often wonder if they are as happy now as when they were with me.

M. E. BAKER.



MR. CASTLE-SLOANE'S AVIARY.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Aviaries at Oat Hall.

By C. CASTLE-SLOANE, F.Z.S.

The range of aviaries shown in the accompanying illustration is 48ft. long and 32ft. wide. The houses are built of brick; and the roof is formed in two parts, the back part being higher than the front, so as to allow sufficient light for the caged birds which are kept on the shelf at the back. The roof is a raftered one, match-boarded with felt and zinc above, which is painted green; it makes it warm in winter and not too hot in summer. The flights are constructed with iron standards, the wirework being light straight-wired bird lattice, (not the ordinary wire netting), attached to the iron standards. which are fixed in brickwork. This is some little height, making a shelter for the birds when they are on the ground, the latter being paved with large flags, which are quite as good as cement, if not superior, as the latter, if not properly laid, is apt to crack and break up, and should you have fountains, (whichI have), it is far easier to pull up the flags to see to the pipes, if necessary, than to break up cement. Planted in the flight are weeping willows, laurels, briars, etc., and I have four fountains, one in each compartment. To see the fountains in full play in the summer, with the birds flying through the spray and others bathing in the basins, is a pretty sight. The rain-water from the roof is collected into a tank which is placed inside the aviary, and this supplies the fountains. Half of the top of the flight is covered with Duroline, the same material as was used on the roof of the Royal Aquarium. Each flight is 15ft. by 12ft. Dividing the flights from the houses is a wall about four feet high with six feet of glass above it, making the total height 10ft. There are two windows, which can be opened or closed as desired, in each compartment. Strawson's patent glazing is used, no putty being needed, and any of the panes can be replaced in a very short time; in fact, if necessary, *e.g.* in the summer time, the whole of the glass can be removed, thus leaving the aviary open in front. The doors are half glass and half wood; all the glass is protected with wire netting on one side. Firs and other branches are hung up, the doves and other birds taking full advantage of them. The seed is supplied in trays. Each house is 12ft. by 11ft., divided by wirework, (light straight-wired bird lattice), whilst at the back, the whole way along, dividing the houses from the passage, the same wirework is used. All the doors are opposite one another, and no wooden or brick partitions are used. The birds can therefore see anyone who enters the aviary, and are not frightened as they would be if opaque partitions had been used. A small green-house is first entered before the six-feet passage can be reached, this being divided from the aviary by a door which prevents any stray bird escaping. A 2ft. 6in. shelf runs along the length of the brick wall at the back for the caged birds, and underneath are kept the various bins for storing the seed, etc. At the far end of the aviary is the rain water tank above referred to, which supplies the fountains, and from a tap one can obtain water for the other birds. The tank is placed inside to keep the water from freezing and to take the chill off. The aviary is heated by a Carbotron fuel stove, what fumes arise from it being carried up an india rubber pipe to the open. The stove requires to be attended to only once a day, and the heat can be regulated by an arrangement of valves, and there is a basin with water in it to cause a moist atmosphere. I have to thank Dr. Butler and Mr. Wiener for their valuable suggestions as to the design of the aviary, which I have taken full advantage of.

Among the Doves in the aviary the following have bred :—White-fronted Dove, *(Jamaicensis leptopti)* ; Rufous Dove, *(Leptoptila reichenbachi)* ; Cinnamon Dove, (*Chamaepelia talpacoti*) ; White-winged Zenaida Dove, *(Melopelia leucoptera)* ; Australian Crested Pigeon, *(Ocyphaps cophotes)* ; and the Senegal Dove, *(Turtur senegalis)*. In the other compartments are various pigeons, the Choughs, Hartz Canaries, and British birds. On the shelf are my special favourites, a Green Amazon and a talking Grey Parrot, a splendid pair of New Guinea Eclectus, a Touracou, a Toucan, and an African Black Hornbill. Of the latter I hope to write a short account on a future occasion.

Another aviary I have is 28ft. long by 26ft. wide ; it is divided into three compartments, the two outer ones being 15ft. by 8ft., and 10ft. high, and the centre one 21ft. by 12ft., and 14ft. high. It is made of iron standards with ½in. mesh wire affixed and let into brickwork all round ; the floor is a cemented one and half the runs are covered with glass, swinging perches and branches are hung up, and the seed and water are placed in trays, the water being collected from the roof into a tank which is placed by the side of the aviary. The houses are matchboarded and are partitioned off, allowing separate places for the seed; each house has a separate door for entering the runs, and a separate door for entering the houses; the floors are cemented and the houses stand on brickwork, the two outer ones being 5ft. by 6ft., and the centre one being 8ft. by 5ft. I have in one compartment Peach-faced Lovebirds, a pair of Sepoy Finches, a King Parrot, and some Budgerigars. In the centre compartment are Rosellas, Mealy Rosellas, Blue Bonnets, Petzi Conures, Alexandrine Parrakeets, Black-headed Conures, etc., and in the other compartment are various small birds such as Waxbills, Masked, Long-tailed, Yellow-vented, Parson and Saffron Finches, etc.

Bird Life on the Ouse.

By Corvus.

There has been a frost during the night, and the ground under the bushes and hedgerows where sheltered is still white, but the sun is gradually imparting a certain degree of warmth to the air, as it shines in a cloudless sky, giving an illusion of summer, and we feel the exhilarating effect of the day as we start on a walk along the bank of the Great Ouse, with eyes and ears on the alert to note what may present itself in the way of bird life on this part of the river which divides Huntingdonshire from Cambridgeshire. Although it is the dead season of the year the stream is not without a certain beauty, as it flows through the flat fen land, in the contrast between the bright blue water and the bordering fringe of straw coloured dead reed stalks which look like huge stubble, and which are now all that remains of the brilliant green flags and rushes, which in summer clothe so much of the river banks. The first bird we notice is a Black-headed Reed Bunting (*Emberiza schœniclus*) in the reed stalks, and then some Linnets among the rank herbage on the bank, while a Pied Wagtail flies across the river. A Moorhen now disappears among the cover on the opposite side, while still further down two more swim leisurely to shelter.

Nothing more appears for some time save a flock of Fieldfares uttering their shrill cries as they pass overhead, and a few Redwings hopping about here and there, but now two birds on the water catch our eye and the glass reveals them to be Little Grebes or Dabchicks, very common here in the winter. From a dense reed bed a Coot emerges, but catching sight of us instantly retreats into the forest of stems, and now we became aware of a Kestrel hovering not far off, and almost immediately afterwards of a Crow flying straight towards him. With the greatest ease the Windhover evades the clumsy charge of his corvine enemy, and resumes his hunting further away, when again the blundering Crow makes for him, and again in vain, for the falcon flies still further off and resumes his hovering, only to be followed by the gentleman in black, until apparently wearying of the incessant persecution he sails away, and soon outdistances his tormentor. As we go on we approach a flock of Starlings busily engaged in feeding near a herd of cattle, and numbers of Larks rise from the short pasture and settle again some way ahead.

It now becomes evident that the character of the day has changed. A cold wind has sprung up and the sun only shines fitfully through the driving masses of cloud, while to windward the sky has turned into a uniform dirty grey hue. Snow seems probable, and it seems the best policy to retrace our steps, so we accordingly turn back. High overhead the wailing cry of a Curlew accentuates the general effect of dreariness which the landscape now assumes. A Redshank appears from the other side of the long osier bed, and crosses the now leaden-hued river a good way ahead. For a long distance now we see no bird of interest, and hear no noise, save the shivering and rustling of the dead reeds under the chilly wind, but just before we reach the ferry a flock of Peewits flap along over head uttering their plaintive notes.

Continuing our way by a path the other side of the Ouse, the laughing cry or yelp of the Green Woodpecker rings out among some elm trees, and the bird itself flies across the road to some old willows, whose decaying trunks will no doubt afford him a profitable field of research. We now turn up a lane bordered on one side by a high hedge, the resort of numerous Blackbirds and Thrushes, and at this season also of Fieldfares and Redwings, who take heavy toll of its berries. On glancing over the dyke on the other side to where the meadows stretch away toward the river we notice two Herons get under way with heavy flaps of their great wings. Proceeding, we now draw near a favourite haunt of Goldfinches, but are disappointed by seeing none. However there is some compensation to be had in the sight of a splendid cock Bullfinch who flits along the hedge in front. Against the brown hedge some crab apples show up in strong relief, and on the leafless tree a beautiful little Goldcrest is fluttering among the boughs. This lane is rich in Yellowhammers and Chaffinches, to say nothing of Tits and Hedge Sparrows. From a field on one side comes the quarrelsome squealing of Starlings feeding, and then two Crows fly over at a good height. Our walk is nearly over now, and we have almost reached the end of the lane when a multitude of little mouse-like squeaks proclaim the presence of a flock of Long-tailed Tits, and the hedge seems full of the little acrobats. As we enter the village the inevitable Sparrows, Greenfinches, and Chaffinches fly up from a garden, and the last bird we see is a fearless homely Robin perched on the garden wall.

Something about the Nightingale.

By W. T. Greene, M.A., M.D., F.Z.S.

The time of the singing of birds has come, and the voice of the Nightingale is heard in the land. But in what particular part of it, wild horses will not make me divulge, for the silent foot of the crafty trapper is also about. He has prepared cunning baits to delude and capture the minstrel, and in ninety-nine cases out of a hundred will but betray him to an ignominious death.

Very few Nightingales, probably not more than two or three in a hundred, that are taken prisoners on their arrival in the Spring, will survive many days, sometimes not many hours in captivity. Caught at the very moment when his expectations of future happiness are at their highest, and he is pouring forth his strains of delicious melody to guide his partner to their Agapemone that is to be, it can easily be understood that it is impossible for him to survive the sudden shattering of all his hopes, not to speak of his being immured in a filthy dungeon and deprived of his natural food.

It is to be hoped therefore that the readers of this Magazine and their friends will not take part in any such lamentable tragedy as the trapping of a Nightingale in the Spring, for the proverb tells us that it is the opportunity that makes the thief, and if the trappers were to find that there was no market for their wares, they would not give themselves the trouble to take the birds of which they could not dispose.

The Nightingale is purely insectivorous in its habits, feeding largely on small beetles which it captures in the woods and copses it frequents, and it is useless to try and keep one of them in confinement on artificial food for any length of time. A diet consisting mainly of biscuit and dried yolk of egg will give the Nightingale indigestion, and it is vain to expect music from a dyspeptic minstrel.

At the same time when a Nightingale is properly dieted, which it can easily be with dried ants' eggs for its staple food, it will sing lustily in the house for a much longer period than it would in its wild state, and be in perfect feather and condition, thus proving that it is not only healthy but happy. It is usual to give too many mealworms, three or four a day being enough in my opinion, for although so dry and apparently innutritious there is really a great deal of nourishment in the dried ants' eggs of commerce, which are mostly imported from Austria and the Tyrol. [Weight for weight there is more than twice as much nourishment in dried ants' eggs as in fresh.—Ed.] Of course these so-called eggs are really the cocoon of the ant, and their vitality is destroyed before they are imported, so that it is no use for anyone to attempt to hatch them out in a hot-bed, as one sagacious individual thought might be possible, nor can the tiny red ants that infest some houses, and these not always in the country, be imagined to proceed from the same source, as a correspondent of a weekly paper recently fancied was the case.

To resume:—a Nightingale will keep in health for twelve or fourteen years, and sing for a great part of the year, if dieted on these foreign ants' eggs, three or four mealworms a day, and any small insects that can be captured in the garden, especially if he can have a fly round a greenhouse for an hour or two daily, where he will pick up many pests that have baffled the sagacity of the owner to get rid of.

He will do no perceptible damage to the plants, and any marks he may leave behind him on the leaves may easily be washed away by the ordinary garden syringe.

While the bird is flying round the greenhouse the windows should of course be closed, or better still, protected by a netting of small enough mesh to prevent the bird's escape. If the door of the cage be left open the Nightingale will return to it when he feels hungry or requires a drink, and a little ingenuity will effect the closing of the door by means of a piece of black thread fastened to it, which can be gently pulled without alarming the bird.

But someone may ask, if Nightingales are not to be caught in the Spring, how are they to be obtained for the house? The objections stated do not apply to taking them in the Autumn just before their departure, and if they are then freely supplied with live insects they will soon become reconciled to their changed surroundings, and make themselves at home. Or they may be taken from the nest and brought up by hand, but such birds do not as a rule sing as well as those which are taken full grown in the Autumn.

There is no difficulty in hand-rearing a young Nightingale if a few necessary points are observed. Their own nest if possible, or one of some other bird such as a Chaffinch or a Hedge Sparrow, with the young Nightingales in it should be placed in a little round basket with a lid, and if this is kept closed as a rule, the young birds will open their mouths to be fed when the lid is raised. The feeding can be done very readily by taking up three or four ants' eggs at a time with a pair of small forceps or tweezers and thrusting them well down into the wide open mouths of the youngsters, who will then swallow the food without any hesitation. Care must however be taken that only the eggs are used, and that no portion of the rubbish usually included in them be given to the birds, as it would bring on fatal stomachic troubles. In addition to the ants' eggs any small insects that can be captured, especially small green caterpillars, may also be administered to the youthful Nightingales, which require feeding every ten or twelve minutes from daylight to dark, a somewhat troublesome proceeding that no one should attempt, who is not prepared to carry it out faithfully.

Sometimes a tame insectivorous bird, particularly a Lark, will adopt young birds of similar habits and rear them in a cage, but it is not always possible to obtain such a foster mother, and it is better to rely upon one's own efforts with the tweezers and the dried ants' eggs.

Three or four times a day a mouthful of eggs may be dipped in water for a moment before being supplied to the nestlings, which is better than damping all the food at once, a proceeding which is apt to deprive it of some portion of its nourishing qualities. In a week or ten days the young Nightingales will begin to feed themselves, and will then require very little more than the ants' eggs for their sustenance; water of course should then be allowed them, and they are very fond of bathing.

They are best kept in a long low cage wired only in front, the top being lined with some soft material or padding, and with a screen over one portion of it that they may have a dark corner to retire to if alarmed. Generally after they have begun to feed themselves they are rather wild, but that soon passes off, and they become quite familiar and even bold, readily taking mealworms from the fingers and flying about the room, instantly returning to the cage when a mealworm is thrown into it. Until after the first moult a young Nightingale is speckled all over very much like a young Robin; from which however it can be distinguished by the reddish brown colour of the tail coverts and upper part of the tail.

As Nightingales migrate to warm countries in the winter, and are somewhat impatient of cold, care must be taken that the temperature is not allowed to fall too low in the room or aviary where they are kept.

I see no reason why a pair of tame hand-reared Nightingales should not breed in an aviary where there was sufficient cover for the purpose, and a tree, near the roots of which they could construct their somewhat slovenly nest, which I have never found in any other situation, except once amongst the ivy on a wall, though I have heard of one being discovered in a gooseberry bush. According to Seebohm there are two types of eggs of this bird, one bluish green, the other olive brown.

[To the best of my recollection a gentleman living at Kidderminster once published either an article or a letter describing the outdoor aviaries in which he successfully bred Nightingales, I believe for some years in succession. Perhaps some reader can supply the reference.—Ed.]

A Lesson from the Poultry Yard.

By H. R. Fillmer.

At first sight there might appear to be a great risk of being led astray if we base arguments as to management of cage and aviary birds upon observations of poultry. There is a very wide structural difference between gallinaceous birds and the passerine species with which our bird-rooms and aviaries are chiefly peopled. Nevertheless, if he be careful not to press the analogy too far, the aviculturist may learn a good deal from the poultry-keeper, because although any two series of birds may present striking morphological differences, I am told their deeper physiological characteristics are very much the same.

It used to be the universal practice to give newly hatched chickens a mixture of hard-boiled egg and bread crumbs, exactly like the old-fashioned orthodox diet for young Canaries. Some gave this food for the first day only, others gave it for three days, but it was generally recognised, (and this point is worthy of note), that it did more harm than good if continued after the third day. But some years ago many large breeders took to giving from the first nothing but biscuit meal, made crumbly moist, and found that chickens did just as well on this as they did on the egg; and in course of time egg-food for chicken became almost a thing of the past with poultry-keepers of progressive tendencies. Biscuit meal thus prepared is still used by many poultry-breeders from the shell until the chickens are old enough to be fed like the adult fowls. It is undoubtedly a valuable food, but when using it care is necessary that the feeding pans are kept thoroughly cleansed every day, for when "sour" it readily becomes a cause of the fatal disease septicæmia, to which some breeds are much more susceptible than others. This applies, of course, equally to all moist foods, and not merely to biscuit meal.

But within the last two or three years the "dry-feed" system has come into vogue, and appears likely to supersede the practice of supplying moist food to young chickens. This dry food consists of a mixture of crushed wheat, canary seed, groats, small rice, or any other small or crushed grain, with a proportion of fine flint-dust or gravel. This last is essential, and without it dry feeding cannot be successful. A small quantity of animal food is generally added in the shape of fine crissel and dried flies. The mixture varies slightly with the different brands, but according to my experience its precise composition is not a matter of much importance. The essential point is that this dry food is given to the chicks as their first food, and that they are fed on it until they are at least a month old. They must, of course, be constantly supplied with water, and also have green food.

It will, I think, be admitted by all who have given this "dry feed" a fair trial, that a larger proportion of healthy chicks can be reared upon it than upon any other food. In my experience, when this system is adopted, it is most unusual to lose a chick which has once got fairly on its legs; while the miserable "wasters," (always crying for the food which does them no good, and of which there are so often one or two in a brood fed on soft food), are conspicuous by their absence. (These wasters are probably in most cases the victims of a chronic form of septicæmia). Its only drawback is that the food proves an irresistable attraction to flocks of Sparrows, which steal large quantities unless measures are taken to exclude them.

Now, if what I have written above be compared with what Dr. Creswell has said on the egg question, and on the dangers of moist foods, it will be seen that up-to-date poultry-keepers have arrived at conclusions upon these subjects which strongly support those of our Editor.

Birds in the Insect House at the Zoological Gardens.

By J. E. R. McDonagh, M.R.C.S., F.Z.S.

It is my object to give a brief sketch of the different birds kept in the Zoological Gardens, and, as far as possible, to mention any new exhibits worthy of notice, which come in from month to month.

I begin with the insect house because not only does it contain the rarest and least often seen of the birds kept in captivity, but it is the least frequented house in the Gardens. It will always well repay anybody interested in birds to spend some little time there, as first and foremost are the lovely Birds of Paradise, three in number, all in the pink of condition, and with their gorgeous plumage shown to its full. Occasionally one is fortunate enough to catch the Greater Bird of Paradise "showing off," a sight that is really worth seeing, as he displays all his beauty to the fullest advantage, assuming different attitudes, not unlike a Ruff making love. Beautiful as these birds are, the noise they make is horrid ; it is very shrill and consists of about two or three notes. Should anybody wish to increase his knowledge concerning these birds and at the same time have some most interesting reading, Wallace's "Malay Archipelago" will fully meet his requirements.

Amongst other birds in the house are seven Yellow and Purple Tanagers which have just lately arrived, three of them being males. Next door to these is a Warty-faced Honey-eater, which is in fine condition and has been in the Gardens some years. In the next cage, keeping company with the King

Bird of Paradise, are some Hoopoes, an Abyssinian Fruit Pigeon, and some White-headed Long-tailed Tits. Of these the first mentioned have apparently received their somewhat peculiar name from their cry, as both their Latin and Greek names are practically the same; pleasing as their appearance is with their large erectile crests, their habits are quite the reverse, since they are not only filthy feeders, but also use the foulest material for their nests.

A bird in the next aviary also has a curious name, the Toucan, a South American word which means "nose of bone." The huge beak is very like the claw of a lobster, and no one has yet given what would seem to be a satisfactory explanation of the precise need for its great size; inside is a long slender feather-like tongue.

In the same house and belonging to the same family is a Spotted-billed Toucanet, *Selenidera maculirostris*, and I think I am right in saying that it is the first of its kind which has ever been in the Gardens.

Other birds are a Hill Mynah, (which talks beautifully and clearly, suddenly coming out with these sentences, "I am surprised at you," "Who are you?" "See Tommy riding a tricycle"), a saturnine-looking Mocking-bird, so called because it possesses the power of imitating the notes of other species of the class, a Blue-cheeked Barbet, a Spotted Emerald Tanager, and two Purple Sugar-birds. One of these last has red legs, a sign of age; the other, with yellow legs, was originally thought to be a female, but is now assuming male plumage.

Editorial.

AN EPIDEMIC AMONG WOODPIGEONS:—The reference made by my correspondent "Enquirens" in our last issue affords a good instance of what Mr. E. Kay Robinson so rightly deprecated in his remarks on Bird Surgery, when it will be remembered he spoke very strongly about the habit of "jumping to conclusions" being the means of imbuing thousands of readers with wrong ideas, and so of making it "difficult for the average reader to get a proper understanding of nature."

A gamekeeper, writing to *The Country Side*, mentions an epidemic of fatal disease among Woodpigeons, and advances the opinion that it was caused by eating beech mast. Indeed, he says there is "strong evidence" to this effect, inasmuch as he has always noticed the health of the pigeons to be good in those years when acorns were plentiful. But is this evidence? or only "jumping to conclusions"?

If he had shown that he had identified the particular disease—that it was only due to a food,—that there were but two foods, acorns and beech mast, which these birds ever ate,—that acorns and beech mast were never co-existent the same year,—that the disease never appeared in the acorn year, and always did in the mast year,—then, and then only, could we say there was any evidence in the direction indicated. At present the best we can say in its favour is that the conclusion arrived at on such meagre premisses is highly improbable.

But let us review the facts of the case as detailed. Last autumn acorns were scarce, and the bodies of the birds could be picked up by hundreds. Some were very fat and some were extremely emaciated. In the throat, especially near the orifice of the wind pipe, there was always to be seen a condition described as a thick coat of lumps of matter like crystalised honey, but of a brighter colour, and, as might be expected, "there was a considerable unnatural fullness in their necks and throats." This coating in the throat is also spoken of as "waxy matter."

From even these few particulars those readers of this Magazine who have carefully followed "The Story of Bird Death" will have no difficulty in placing the disease from which the Woodpigeons suffered. Its epidemic nature, its virulence, and the presence of the caseous deposits in the throat are sufficient indication of its having been an instance of an acute avian septicæmia, due to infection with the microbe attaching to this disease. It will be remembered that among the special examples which I adduced, I noted one as occurring in a Woodpigeon shot by Mr. Gladstone and sent to me through Mr. Pycraft for examination, while among the domesticated species of the Dove family it is familiar enough to all pigeon fanciers under the names of "canker," "roup," "wing disease," and what not. And the reason why the same disease should be more or less sporadic and relatively much less virulent in the latter birds, while it is violently epidemic and violently fatal in the Woodpigeon, will have been gathered from an attentive perusal of the chapters devoted to the question of comparative immunities.

In such an epidemic as the one under notice the channels of infection are easy enough to recognise.

The droppings of an infected bird are teeming with untold myriads of the pathogenic bacteria ; the beech mast and any other foods lying on the ground become contaminated by these droppings, as does also the stagnant water in the ditch or furrow nearest to the feeding grounds to which these birds resort after the manner of all pigeons directly after filling their crops. And so to the medical biologist it is no secret how a crowded community of highly susceptible wild birds becomes almost exterminated from time to time—to their ultimate preservation as a species.

That this form of fatal disease is due—as is surmised by an anonymous commentator of the gamekeeper's—to chronic irritation of the gullet by the fine hairs on the beech mast, is untenable. For a bird to die while yet one of " the fattest I have ever seen," as the gamekeeper says, shows that its illness has been of very short duration, and its throat deposit of correspondingly rapid formation. Putting, however, these acute cases on one side, and considering only those which might conceivably be due to chronic irritation by beech mast or any other food, we shall see that, for this to be so, the disease would not be epidemic but endemic in its character, *i.e.* there would always be a more or less steady average of cases occurring every year. And it will be equally plain that in this case the birds themselves would long ago have worked out their own salvation from the danger by the natural processes of evolution, *i.e.* by survival of the fittest, (seeing that beech mast has formed a part of their food for countless ages), just as the domestic pigeon has nearly arrived, by at the least 5,000 years of close contact with the septic bacillus, at the goal of being able to protect himself from septicæmia—which the Woodpigeon has not had the opportunity of doing by the same means.

THE GREAT CRESTED GREBE IN SURREY :—In the summer of 1902 a pair of these birds nested on the Penn Pond in Richmond Park, and on two of the days I visited them I had the satisfaction of seeing the one I took to be the male bird feeding the young. To the best of my recollection these were two in number. On one occasion they were not more than thirty yards from the bank, where I was quietly crouching behind the reeds, and with glasses I got an excellent view of them. The old bird would dive, and after a short interval would come up with a roachling in his beak, which was promptly swallowed by the particular young one which managed to "get there" first. At least once in every five or six minutes, while I was there, this performance was repeated, and I remember it struck me that, if what I saw was a fair sample of what went on during the whole of the daylight hours, the labours of the old and the appetites of the young were at least of respectable dimensions.

This year, according to the *Morning Post* of March 19th, there were three of these birds already at that date on the same pond, two males and one female. Considering their gregarious habits and the strict preservation carried on in Richmond Park, it is curious that the number of these Grebes visiting the spot for breeding purposes does not materially increase.

TAXIDERMISTS' PATHOLOGY :—A gentleman having recently lost a rare and valuable bird after apparently only two days illness, (in which the only prominent sign was convulsions), and being desirous of preserving the skin, sent the body to a bird stuffer, subsequently receiving from this person the information that every organ in the body was healthy except the liver, which was gangrenous. He then passed these data on to myself, in hopes that they might prove a sufficient guide to an opinion on my part as to the primary cause of the trouble, and hinted at the probability of poison. He knew quite well that from any one of a dozen or two gentlemen who are always ready for such emergencies, he could have readily obtained a cathedral decision on the point, including a confirmation of his somewhat improbable suggestion of poison, and so it was natural enough for him to expect at least something from a medical man in the same direction.

My answer however was brief, and to the effect that the taxidermist's statement was too stupid and silly for me to found any corollary upon it. And now comes a point worth our consideration. My correspondent seems to have thought—I don't say he actually did—that I was rather uncharitable, for he tells me that he felt obliged to the birdstuffer for helping him as far his knowledge went, and that for his part he did not view with contempt his having given the best information he could. Of course no one can have a word to say against this attitude. It does infinite credit to my correspondent's heart : the pity is, that when he asked for bread, he got but a stone : the greater pity is that he did not realise beforehand that from such a source he would get only a stone when he wanted bread.

That it *was* only a stone is evident. "Every organ in the body healthy except the liver, which was gangrenous." A gangrenous liver indeed! Why not a gangrenous heart? or even a gangrenous head? And with this liver, dead as a door nail, all its intimately correlated organs healthy!! Why it is nearly as funny as the dear little dicky-birds we know of—that die just when they make up their mind to, although every organ in their bodies also is perfectly healthy. Our taxidermist is evidently a man of humour. But though it is possible to forgive our learned brother his little jokes, we really must draw the line at the bird-stuffer. Him at any rate we should like to take seriously.

W. GEO. CRESWELL.

Review.

"*Birds of the British Islands,*" *by Charles Stonham, C.M.G., F.R.C.S., F.Z.S., M.B.O.U., Senior Surgeon to the Westminster Hospital. With illustrations by L. M. Medland.*

This is an important work announced by Mr. Grant Richards, and is to appear in twenty parts, the first in April or May. The plates, which are uncoloured, are of large size, and of very high merit, so far as we can judge from the specimen before us. They are executed by a new process, and look exactly like original wash-drawings. They are certainly by far the finest black and white illustrations of birds which we have ever seen, but still they *are* black and white, and it seems open to question whether, at the high price of £6 15s. net, a book with uncoloured plates will have a large sale.

Post Mortem Reports.

(*Vide Rules*).

Canary Nestling. (Mr. Whittaker). Acute enteritis was the cause of death.

Canary. (Mrs. E. M. Butler). Congestion of the liver and apoplexy—not of septicæmic origin.

Budgerigar. (Mr. Chaplin). This bird was inordinately fat, thick layers being present even under the skin. The swelling in the abdomen was due to a globular cyst attached to the peritoneum and containing fatty matter. The liver was also undergoing fatty degeneration, the result of long continued congestion.

Gouldian Finch. (Miss Curtis). Congestion and fatty degeneration of the liver was present, but pneumonia was the actual cause of death.

Green-winged Dove. (Mr. Castle-Sloane). This bird died of pneumonia of right lung. Nothing could have been done in the way of treatment.

Blackcap. (Mr. True). This bird was a mass of fat and died of apoplexy.

Lark. (Mr. True). Unlike the Blackcap this bird was greatly emaciated. The cause of death was chronic enteritis.

Correspondence.

SEPTICÆMIA *v.* TUBERCULOSIS IN BIRDS.

Sir,—My copies of *Bird Notes* for December and January have just reached me, in which I am interested to see that your contentions and evidence, *re* Septicæmia *v.* Avian Tuberculosis have apparently been accepted as irrefutable by your opponents. Allow me therefore to offer you my belated congratulations on having successfully laid out the "Consumptive Parlour Canary" Bogey. Emilius Hopkinson, M.B.

Gambia, West Africa.

[During some of Dr. Hopkinson's visits to my house when on leave last summer, I took the opportunity of showing him my microscopical and other preparations relating to this subject.—Ed.]

BREEDING BUDGERIGARS UNDER DIFFICULTIES.

Sir,—Some weeks ago I noticed in Mr. Swaysland's shop a pair of Budgerigars in a small parrakeet cage measuring barely one foot square. One of the birds was sitting in the corner of the cage upon some eggs. There was a cocoanut shell suspended in the cage, which the birds had declined to make use of as a nest.

The other day I was in the shop again, and was surprised and pleased to find that the Budgerigars had three healthy young ones, fully fledged, and apparently about a fortnight old. Mr. Swaysland told me that they had been reared entirely on canary seed and grass. He gave the parents a fresh turf daily, and they stripped it of every blade of grass.

I remember that, some ten years ago, Mr. Swaysland reared some (or at any rate one) young of the common variety of Budgerigar in a precisely similar cage.

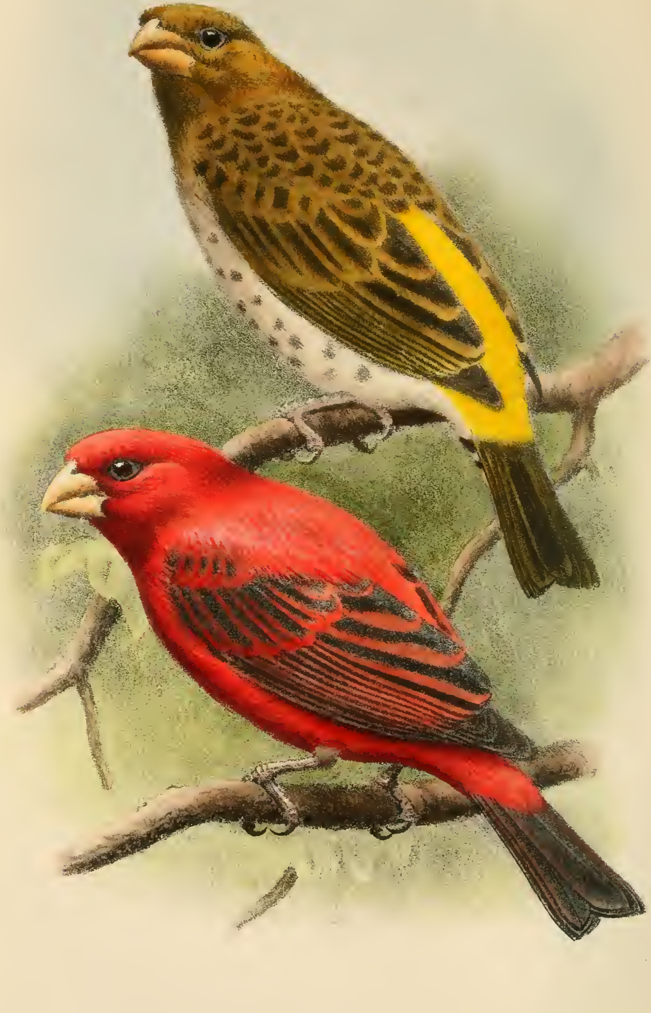
Horatio R. Fillmer.

AFFECTION IN BIRDS.

Sir,—It may interest your readers to see the following short account of a very curious instance of affection displayed by two hand-reared Larks. They always slept on the window curtain ledge, and never moved till the maid opened the blinds. They would then at once fly down, and with little coaxing sounds would come and sit on my shoulder. Then they would fly out of the window and remain in the garden. If I went out and called them they would come to me at once and always had tea with me when it was served out of doors. They would follow me anywhere like a dog. I had to go away, and though I left word they should be called and spoken to by my maids, after my return they came no more. Alas!

Then there were two Jackdaws belonging to my Grandfather. They never left him, and obeyed his orders in a wonderful way. When he died, one bird was found drowned in a water trough the next day, and the other died a week later. I always thought they were cases of suicide and a broken heart.

E. Warren Vernon.



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SEPOY FINCH.

Hœmatospiza sipahi.

From living specimens in Mr C. Castle-Sloane's Aviary.

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[MAY 1906.

BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Sepoy Finch.

(Hæmatospiza sipahi).

By C. Castle-Sloane, F.Z.S.

Apparently little is known of this bird by British aviculturists. According to the Proceedings of the Zoological Society the first specimen was added to the Society's collection on June 10th, 1902.

My pair I have only recently obtained ; one thing which greatly induced me to buy these beautiful birds, was that I was informed they were sure to breed. In fine condition they certainly were, the cock bird being a lovely geranium red with brown markings on the wings and base of tail, the hen being more soberly clad in a rich golden brown with a grey speckled breast and with the lower back of a beautiful yellow. She is much the tamer of the two and appears to be master and mistress in one.

The way she eats is somewhat startling,—everlastingly at the seed tray until one wonders where she puts it all. For instance, being passionately fond of lettuce she will take great beakfuls the moment you offer it. The cock is not so greedy—no, we had better say has not so good an appetite, because he does occasionally leave the dish,—but after all it is hard to say whether it is voluntary or compulsory abstinence on his part.

Like the Scarlet Tanager, although he has no crest he raises the feathers on the top of the head when startled.

The other day, when I put up some cocoanut husks for the Budgerigars, the hen seemed to be greatly interested in the operation, and no sooner was I out of the aviary than she flew to the perch and began to peer here and there, wondering what on earth it was; then she took courage and jumped on to a husk, looking with great interest into the hole; when she was quite satisfied she began tugging at the loose fibre, the cock meanwhile looking on with a sour face: "I shall not help you" was his expression, and as though to justify this he kept as far away from her as possible.

In view of the striking appearance, as well as of the rarity, of this bird, I feel that I cannot do full justice to it without appending its description as given in *The Fauna of British India*, *Gould's Birds of Asia*, and *Jerdon's Birds of India*. In the first of these extracts will be seen an interesting note as to the manner in which the young males assume their full plumage.

THE SCARLET FINCH (*Hæmatospiza sipahi*).

(From *Fauna of British India. Birds.* Vol. II., p. 209.)

Coloration. Male. The whole head and body brilliant scarlet, the concealed bases of the feathers ashy; wings black, every feather margined with scarlet; tail black with narrow crimson margins; thighs black; under tail-coverts black, with scarlet tips; axilliaries and under wing-coverts ashy, with very small scarlet tips.

Female. Rump bright yellow; with this exception the whole upper plumage, sides of neck, lesser and median wing-coverts are dark brown, each feather with a large and well-defined greenish-yellow margin; greater coverts and quills dark brown, margined with greenish-yellow on the outer webs; tail dark brown with a greenish-yellow tinge on the outer webs; region of the eye and cheeks ochraceous yellow; ear-coverts greenish-yellow with pale shafts; the whole lower plumage pale ochraceous, each feather with a subterminal black mark showing more or less clearly and sometimes concealed.

The young bird resembles the adult female; the male moults the first autumn into the female plumage again, but immediately after commences to assume the adult male plumage by a change of colour in the feathers, and probably attains the full plumage by the first breeding-season.

Bill yellow; legs brown; iris hazel-brown *(Jerdon)*.

Length about 7·5; tail 2·8; wing 4; tarsus ·8; bill from gape ·8.

Distribution. Nepal and Sikhim from 5,000 to 10,000 feet according to season; the Khási hills.

Habits, etc. According to Jerdon frequents both forest and bushy ground and has a loud whistling note.

This species is captured in the Khási hills and kept in captivity.

SEPOY FINCH *(Hæmatospiza sipahi)*.

(From *Gould's Birds of Asia*. Vol. V., p. 62.)

In many parts of its structure, as well as in its general colouring, this bird offers a close alliance to the members of the genus *Corythus*, yet every ornithologist will perceive that it differs from that form, and will agree that Mr. Hodgson has very properly made it the type of a new genus, *Hæmatospiza*. It is not only the most highly coloured species of the family *Loxiadæ*, but its plumage is perhaps more intensely scarlet-red than any other at present known; and in its native woods it must be a most attractive and brilliant object, especially if, like its near allies, it be gregarious, and many males may be seen on the same tree at one time. But little information has been recorded respecting this species. It is said to have been received from Darjeeling and the Himalaya, and in all probability the rich country of Nepaul is its native habitat, as it is from thence that specimens have been most frequently brought to this country. Mr. Blyth states that living examples are occasionally brought to Calcutta for sale; and the Prince of Canino and Dr. Schlegel inform us, in their "Monographie des Loxiens," that it sings very agreeably, and plays a great part in the mythology of the Indians.

The sexes, as will be seen, present a strong contrast to each other.

The male has the entire plumage intense scarlet-red, with the exception of the inner webs of the wing-feathers and the tail, which are black; irides yellowish brown; bill yellowish horn-colour; legs and feet brown.

The female has the feathers of the head black and wing-coverts dark brown, broadly margined with yellowish olive; rump rich orange; primaries and tail brownish black, the former margined externally at the base with yellowish olive; tail-coverts brownish black, margined with yellowish olive; feathers of the under surface dark brown at the base, broadly margined with greyish olive; bill browner than in the male.

THE SCARLET GROSBEAK (*Hæmatospiza sipahi*).

(From *Jerdon's Birds of India.* Ed. I. Vol. II., p. 394.)

Male, brilliant scarlet, with the wings and tail dusky brown, more or less scarlet edged; the tibial feathers dark brown, and the lower tail-coverts dashed with dusky. The female is dusky brown; the feathers broadly margined with dull greenish yellow; rump bright yellow; beneath pale olivaceous yellow, with dusky crescentic marks, becoming more albescent on the lower abdomen.

Bill yellow; legs brown; irides hazel brown. Length 7½ inches; extent 12¼; wing 4⅛; tail 2½; bill at front ½; tarsus ¾.

This magnificent bird has chiefly been found in the S. E. Himalayas, in Nepal and Sikhim; and is unknown in the North West. It is by no means rare about Darjeeling, and haunts elevations from 5,000 to 10,000 feet according to the season. I have generally seen it in pairs. It frequents both forest and bushy-ground, feeds on fruits and seeds of various kinds, and has a loud whistling note.

Pr. Bonaparte and Schlegel, as quoted by Gould, state that this bird sings very agreeably, and plays a great part in the mythology of the Hindoos. This of course is quite erroneous, and the common *Tuti* of India, *Carpodacus erythrinus* was probably intended.

Bonaparte places next this bird a remarkable species from Japan, *Chaunoproctus papa*, which appears to be coloured somewhat like *Pyrrhospiza punicea.*

Wanderings in the Zoo.

By J. E. R. McDonagh, M.R.C.S., F.Z.S.

It is my intention this month to briefly notice the remainder of the birds on the Northern side of the Canal, taking in the Cranes' Paddocks, the Owl Cages, which are now to the right of the Insect House, their old habitat being now occupied by the Civets, and the Northern Pheasantry. Before starting I might just mention that a new Blue Sugar Bird (*Dacnis cayana*) has recently been added to the collection in the Insect House.

The Cranes' Paddocks as such are comparatively new, having been previously occupied by the Japanese Deer. Recently they have been turfed, and arranged with rockwork and little streams of water, constituting a most natural looking abode for their present inhabitants. In it we see specimens of the Manchurian Crane, or Eastern Sarus, a bird frequently kept in captivity by the Japanese and forming the well known subject of their designers. This is one of the finest of the Cranes. Then there is the Demoiselle or Numidian Crane, distinguished from every other by its long white ear-tufts, and the Asiatic White Crane perhaps *the* finest of the Family, with nearly the whole plumage of a snowy white. There are also some Common Cranes, (formerly natives of England but now only very rare stragglers), Canadian, and White-necked Cranes.

The Crowned Cranes for specific distinctions are placed in a separate genus; they are extremely beautiful birds from Africa. The Crown consists of black glossy cap-like velvet, consisting of fine feathers, etc., with a tuft of hair-like plumes behind it. The sonorous and peculiar trumpet-like note emitted by Cranes is probably due to the formation of their windpipe, which makes three turns in the bony wall of the breast bone; it is heard both during flight and while on the ground, and is accompanied by a characteristic stretching upwards of the neck and bill, the latter being kept open all the time. In the breeding season the birds perform extraordinary dances.

The new building devoted to Owls is a great improvement on the old one, as each aviary is provided with a shelter into which the birds can retire at night. There are nineteen aviaries, containing about forty Owls, making a very good collection. Among the specimens represented are the Tawny Owl, the largest of the Owls indigenous to Great Britian; the Barn or Screech Owl, by far the commonest, inhabiting almost every country in the World; and two fine specimens of the Snowy Owl, one from the Arctic regions, and the other captured at sea off Cape Race. This Owl migrates southwards in the Winter. There are also specimens of the Striped Owl, Naked-footed Owlet, Cape Eared Owl, Short-eared Owl, Great Eagle Owl, (two bred in the Gardens), Fraser's Eagle Owl, Spotted Virginian, and Cape and Milky Eagle Owl, Ural Owl, Australian, Mexican, African and Galapagan Owl, and last but not least the Winking Owl, why so called I do not know, because the nictitating membrane or third eyelid is equally well developed in all the "striges."

Next comes the Pheasantry, containing many excellent examples of these lovely birds. In the first aviary are some hybrids between the Mongolian and the Common Pheasant, born in the Gardens. Hybrid Pheasants are not only often fertile *inter se*, but cross as freely with other hybrids, so birds are frequently seen in which the blood of three species is mingled.

Specimens of white and pied varieties of the Common Pheasant (*P. colchicus*) often occur, and there are at present some in the Gardens, but it will be noticed in the case of the male bird that it is perfectly white except for the pigment remaining in the eye and in the naked patch around the eye. Therefore it is only a partial albino. Looking carefully one can distinguish areas marked out where the colours should be, showing that these colours are partly formed by structural peculiarities in the feathers in the form of prisms, etc. The other pheasants are the Ring-necked, which has so interbred with *P. colchicus* that now one rarely comes across what appears to be a really pure bred bird of either species, the Gmelin's Ring-necked, Satschen Ring-necked, Elliot's, Reeves', Talisch, Prince of Wales' and the Japanese Pheasants, which also freely interbreed with the Chinese Ring-necked (*P. torquatus*), the male hybrid being a remarkably fine bird, surpassing in size and beauty either of its parents.

(*To be continued.*)

Some Reminiscences of my Early Days of Foreign Bird Keeping.

By J. A. Swan.

(*Continued from page* 13.)

It is an extremely natural transition from the Weavers to the Whydahs, and these latter completely charmed me very early in my avicultural career. Their quiet gentle manner and pretty little dignified appearance seemed to me to give just that touch of refinement necessary to soften the more vigorous behaviour of the Weavers. I must confess that when I wrote the foregoing I was thinking of the Paradise Whydahs, so perhaps it is necessary to qualify my remarks when mentioning the Pin-tailed species. For of all bad tempered birds, the Pin-tailed when in colour stands first " by a long chalk," as our American cousins have it. At least this was my experience, gained from several specimens at different times. When out of colour, however, their malicious temper departed to a very large extent, though they were never in any sense sociable birds. I often felt tempted to pull out the wonderful tail so as to punish the bird by putting him in "prison" for a week or so, but I doubt very much if it would have had the desired effect. There appeared to me to be a thoroughly scowling, cross-grained look about the Pin-tailed Whydah's face when in breeding plumage, and nothing short of a moult removed that impression.

Now the Paradise Whydah is very different and enjoys himself in a quiet orderly fashion. Most of mine used to delight to get to the highest step of a long swinging perch and then make a swoop downwards to the lowest one, where they would land with a click. A spring and a fly upwards took them aloft again and the action took place so quickly after the descent as to appear one effort. They would vary the downward flight sometimes by sweeping in a semicircle towards an end perch, and I never remember them missing their footing, although the swing was often swaying from side to side at the time. The action was an exceedingly graceful one, and I never tired of watching it. Indeed, on reflection, I cannot recall any bird more graceful in all its ways than the Paradise Whydah. Their bodies are beautifully curved, their long tails droop in a semi-circle, their delicate legs seem to be made of steel springs and they *walk* in a manner which can only be called dignified. Their bearing indeed always appeared to me to represent the aristocracy of bird life. In a word they are the essence of beauty in birds—all graceful curves.

Another very charming little bird—really little in comparison to the Whydahs—is the Grey Singing Finch. I quite forget how many I have had at one time and another, but it must have been nearly a dozen. I bought them because I wanted to hear their beautiful singing—hardly inferior, from what one hears, to the Nightingale itself. But never a sound beyond a sweet chirp did I ever hear. And how carefully I tried to get cock birds when purchasing, gazing long and earnestly at the little white patch in the throat and the buffish flank feathers, both of which, by the size in the former and the colour in the latter, are supposed to indicate the males. I also got "experts" to pick them out for me when I found I was unsuccessful myself; but the result was always the same. I tried keeping them in large and small flight cages with other birds and by themselves. Still no song, and at last I determined to be disappointed no longer, so a "taboo" was placed on Grey Singing Finches.

Amongst small foreign birds there is no doubt that the jolliest and liveliest are the Zebra Finches. These are great favourites of mine and I have long regarded them as the very embodiment of birdy energy and cheerfulness. It is rarely one finds a Zebra Finch who has not some very important business on hand, or who at least fails to give one that impression. I am referring more particularly to the male birds, for the hens are almost staid little things beside their vivacious lords.

There is no prettier or more suitable birdy present one can make to a friend who has not hitherto kept foreign birds, than a pair of Zebra Finches. They will charm him, or her, by their bright and happy manners, while their personal appearance is exceedingly pleasing. In addition, they are easily catered for, and generally breed with the slightest encouragement—or even without. Being small birds, the Zebra Finches are equally at home in a comparatively small cage or a large aviary, and whilst peaceable themselves, they, or at least the cock, has enough pluck for a bird six times his size.

In a previous article I have recorded an instance of a Zebra Finch thrashing a Crimson-crowned Weaver, and I remember reading somewhere of one of these impertinent mites hurling itself bodily against a great bird which ventured too near its nest; and although the act only deprived the intruder of a feather or two, it succeeded in driving him away. I have also mentioned elsewhere the very friendly feeling entertained by one of my Zebra Finches, who always came as close to me as possible whenever I stood by his cage and chattered away at a great rate, showing the most complete confidence and good nature in every action of his tiny body.

One of the earliest of my purchases was a Chinese Bunting—a bird which was shortly afterwards offered to me as a Brown-headed Bunting. The latter name is very appropriate, for the colour of the head, face, back, and tail is a rich brown, the breast and under parts being a pale yellow. The bird was certainly not of striking appearance; but being among others of diverse plumage, his very soberness seemed to make him conspicuous. He lived with me over two years, and seemed satisfied with the usual food supplied to the Seedeaters, which, by-the-way, always included a saucer of insectile food, though I cannot say I ever saw this bird partake of any.

A very soft reedy little song is a pleasant feature of the Chinese Bunting, and my bird would sit on a perch, quite apart from the others, and softly whistle as if to itself for hours at a time. It was of very gentle disposition, and although as large as the Nonpareil Bunting it never attempted to molest any of its companions—among whom were several smaller and weaker than itself. Altogether I found it a very desirable member of the family and one I was sorry to lose.

I do not think the Chinese Bunting is frequently imported, for it was only rarely that I came across specimens in the East End shops, and it is practically never advertised for sale in the birdy papers. The only other place where I have seen them was in Leadenhall Market, where—as I have already mentioned—they called it the Brown-headed Bunting. I remember the shopkeeper wanted twelve-and-sixpence a pair, and I replied that I thought it too much, and also that I could get the birds elsewhere at a lower figure. The latter remark was like a red rag to the man, and he emphatically asserted that he was willing to stake most of his worldly property, and also his reputation, (whatever that may have been worth), that it was impossible to get them anywhere for less than he charged. I told him as gently as possible that I had no desire to deprive him of his possesions, but if he liked to risk half-a-sovereign over the question, I should be pleased to accept it. For some unaccountable reason he hesitated—having swallowed the camel he strained at a gnat—the possible *actual* loss of ten shillings seeming to be of greater importance than the *visionary* loss of all his worldly wealth—to say nothing of the reputation. However it occurred to me that it was as well he should not accept my offer, which was made half jokingly, as I could not spare time to prove it just then, so I offered to tell him the place whereat the birds could be purchased for considerably less than twelve-and-six a pair. With studied carelessness he agreed, and on hearing it, he rather grudgingly expressed the possibility of my being right. And it was more than possible I was, for I only gave four-and-sixpence for my bird!

One of the most delicately coloured of our foreign birds is the Lavender Finch, with its bluish-grey body and crimson flanks. They are really charming little birds, being quiet and gentle in their behaviour: but unfortunately they are not quite so robust as one would like, and seem more than usually susceptible to cold and draughts.

My first pair went off suddenly within a few days of each other, having been in my possession a little over three months, and others which I subsequently had never seemed to have a come-to-stay look about them. They had their choice of several seeds, besides ants' eggs, dried flies, millet, and grass in the ear, and mealworms; but I often caught them at the bottom of the cage turning over the sand and grit, as if looking for something they could not find—for I never noticed them eat any of the sand. Whether this act was merely an amusement, however, or whether their dietary was not sufficiently varied I cannot say, but the latter seems to be the more reasonable hypothesis. I think one bird lived about ten months—which was the longest—and then died quite as suddenly as the first pair. This dying suddenly appears to me to strengthen the theory of lack of suitable nourishment: their constitution carried them through a certain period—more or less according to the vigour of the individual bird—and then breaking point was touched, when they collapsed like a house of cards.

[Seed eaters of all kinds may be seen picking over the sand and seeds at the bottom of the cage when very ill of almost any disease, and this symptom I think may be taken as a sign that they are beyond recovery. An adequate *post mortem* examination of these Lavender Finches would have revealed the particular disease of which they died.

In common with other seed eaters these birds normally swallow sand, as may be always seen on dissection; and as regards the adequacy of the food supplied, I may say that I have had specimens stand even the winter in my exposed outdoor aviaries on a diet of canary seed and millet alone.—ED.]

(*To be continued*).

Dr. Russ on the rarer Firefinches.

Translated with notes from Die fremländischen Stubenvögel
by Dr. E. HOPKINSON, D.S.O., M.B.

THE MASKED FIREFINCH (*Lagonosticta larvata*) (1).

Dr. Russ in the body of his work says that as he has no personal knowledge of this species, he can give only a short description of it. He then goes on to mention it's habitat as Abyssinia, West and other parts of Africa (2), and to quote Rüppell (3) and Heuglin as having each met with these birds in Abyssinia, in the months of January and April respectively, where they found them at an altitude of from three to five thousand feet, frequenting bamboo-clumps, shy, quiet and retiring little birds, feeding chiefly on grass-seeds. By the time however the Addenda to the volume were written he had had the opportunity of seeing living specimens, on which he writes as follows, giving additional details and a full description of each sex:

Among the many rare birds which I saw in the Prince of Coburg-Gotha's collection I found three Masked Firefinches, (two cocks and one hen), I regret to say only stuffed specimens, though the identical birds when alive had inhabited the Prince's aviaries for some time. This species is so rare that the Berlin Museum has never possessed a specimen, so that I was particularly delighted to find examples here, the first I had ever seen. Further, to my surprise, a few weeks later Herr Snickt, of Brussels, advertised two pairs in the "Gefiederte Welt," which Herr Schuster, the chief of the Luderitz Art Publishing firm of Berlin, obtained, and I am in the fortunate position of not only having a pair of these birds before me as I write, but of also being able to give the hitherto unobtainable description of the hen.

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(1) The scientific names I use are those of the British Museum Catalogue. In the English names I have substituted the commonly-used name "Firefinch" for the German "Astrild."

(2) More recent research restricts the range of this species to East and East-Central Africa. It must be remembered that Dr. Russ' book was written at least thirty years ago.

(3) The only coloured plate I know of this bird is to be found in Rüppell's work on the Birds of Abyssinia.

First, it must be noted that in disposition and habits the Masked Firefinch resembles the Lavender Finch rather than the Common Firefinch. It never shuffles its wings up and down in the peculiar way so characteristic of the latter bird, but it does so from side to side just as the former does. According to Herr Snickt it is one of the most delicate of all the Waxbills. Description: The male in full colour has the crown (4) and occiput blackish-grey; the cheeks, ear-lores, and throat black; nape and back reddish-grey, (each feather being a clear ash-grey on the whole under surface and basal half of the upper, the terminal half above being a lovely dark wine-red); wings, ashy-grey, the outer feathers having faintly reddish external edges; greater wing-coverts ashy-grey, each feather bordered with bright wine-red; tail-feathers black with dark wine-red outer halves, except the two central ones which are entirely red; breast and belly a beautiful vinous red with small white spots bordered with blackish on the sides of the breast; lower abdomen, vent and under tail-coverts smoky black, under surface of tail blackish grey. Upper mandible blackish-blue, lower lighter, a dull silvery blue; iris bright red-brown (5); a narrow blue lid round the eyes; feet pale bluish-grey. The hen has the crown and nape pure ashy-grey with a faint bluish tinge; sides of head and chin light yellowish-grey; lower nape and back a delicate reddish-grey, each feather being ashy-grey except on its terminal half above, which is red as in the male; wings ashy-grey bordered externally with paler grey, the outer feathers having yellowish white inner margins; greater wing-coverts grey; tail-feathers dark grey tinged with reddish and with bright red outer edges, the two central feathers entirely red; breast and rest of under surface light vinous red, at least it looks red, though each feather is really isabelline-grey and only a delicate red on the distal half of the upper surface; each side of the breast is spotted with small white specks; under tail-coverts tawny reddish; under sides of wings and tail ashy-grey; bill blackish blue, the lower mandible lighter at its base. Iris, brown; eyelid, blue; feet, bluish grey. Length 11.8cm., wing 4.8cm., tail 3.9 to 4.4c.m.

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(4) In *L. larvata* the forehead and anterior third of the crown are black, in this and it's slightly larger size differing from *L. vinacea*, which has most of the crown grey with only a thin streak of black on the forehead. From this description I am inclined to think that the birds Dr. Russ thought were *L. larvata* were really *vinacea*, as it applied exactly to the specimens of the latter I had two years ago. Another point in favour of this supposition is that West African birds were much more likely to be imported than those from such an inaccessible place as Abyssinia and it's neighbourhood must have been when Dr. Russ' book was written.

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(5) This is about the only point in which the description does not tally with that of *L. vinacea;* in my specimens of the latter the irides are certainly dark brown.

Dr. Russ then gives a few lines to the BLACK-THROATED FIREFINCH (*L. nigricollis*) quoting from one of the above-mentioned writers to the effect that

these charming little birds were found in pairs or small parties of two to five in thick long grass and clearings in Wau, Djur, and Bongo in Central Africa, where they are apparently resident, although this cannot be considered as quite certain, as they have not as yet been under continuous observation for a whole year. They are shy and quick in flight and prefer the thickest and most impenetrable grass-jungles. In May, when they pair, the male becomes a very bright wine-red, and then sings loudly and sweetly.

The next species is the VINACIOUS FIREFINCH (*L. vinacea*) which our author hardly more than mentions by name in the body of his work, but gives further information about in the Addenda:

The Vinacious Firefinch is also included in the catalogue of the Prince of Coburg-Gotha's collection of birds, and in notes written by the Prince himself . . . . . the following details are given: "It is quite "the most attractive of all Waxbills, and in habits it "much resembles the Lavender Finch. My three "examples I received, under the name of *E. margarita*, "from M. St. Hilaire (Director of the Jardin d'Accli-"matisation, Paris), the only ones he had ever had. I "regret to say they died in December last. Wiener "has or had one specimen in his collection, the "identity of which with the present species has only "recently been established." In the Prince's notes these three examples are also described as nearly allied to the Masked Firefinch; in my opinion indeed the two species are inseparable, ... the grey or brownish-grey crown and the slight difference between the more or less vinous or purplish-vinous colour of the two birds cannot be considered distinctive characters. . . . It is to be hoped that further investigation will shortly decide whether I am right or wrong. (6)

We next come to species more nearly related to the Common Firefinch. Of these the first is *L. rufopicta*, which Dr. Russ in the main portion of his work calls the Red-breasted Firefinch, but in the latter part he amends the adjective to the more appropriate one of "Spotted." On this species he writes as follows: (I use his later name)—

The Spotted Firefinch is distinguished from the common Firefinch by its olive brown upper surface, and the vinous-red (7) of its forehead, sides of head and entire under surface; in size the two agree. From the closely allied Dark-red Firefinch (8) it differs in having paler under tail-coverts and a vinous forehead. Though I have for years . . . . been on the look out for this bird I have never yet owned a specimen. It is therefore one by no means easily obtainable, but it may be imported more abundantly later on, or on the other hand its rarity may continue, as Von Heuglin only met with a few examples in . . . . Central Africa—and that too in the rainy season—haunting the bush near water. It has also been observed on the Gold Coast, so that its range extends over Western and Central Africa. Of its life-history nothing is known,—most African travellers and authors make little or no mention of it,—but Fraser gives a good plate and Reichenbach also has an illustration of the species.(9)

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(6) I have not included Dr. Russ' description, as repetitions of long verbal descriptions of plumage must be tedious, and the one he gives under the Masked Firefinch applies almost exactly to the male of this species, as I mentioned above. The following description of the hen is from a living specimen: In general colour like the cock; no black on head or face: crown sooty-grey, lighter on sides of head: chin and throat light fawn-grey; chest a brighter and more salmon-pink than the back; belly pink washed with ochre; a very few spots on sides of chest; wings and tail as in the cock, but the colours not so bright and the tail feathers sepia below, not black. Bill etc. as in the male. In size the hen is a shade smaller than the cock. I need hardly, I think, remind our readers that Mr. Goodchild gave us a wonderfully lifelike plate of the two sexes in last year's volume of "Bird Notes," a picture which most happily hits off their attitude, colour, and surroundings.

This species is a native of West Africa. In the Gambia, where I made it's acquaintance, it is distinctly rare and very local. I have never seen it away from bamboo country, and not all through that even. They live in small parties in secluded spots, not courting publicity like the Common Firefinch. The diagnostic points of the three species (as given in the Brit. Museum Cat.) are:

Black of head and throat surrounded by red,
  Black of crown confined to forehead, chest red... ... *vinacea.*
Front half of crown and the chest black ... ... *larvata.*
Black of head surrounded by grey; forehead, crown,
  mantle and breast grey ... ... *nigricollis.*

(7) "Dark pink," as in the Brit. Mus. Catalogue, more accurately describes the colour.

In the Appendix the following additional information about the Spotted Firefinch (*L. rufopicta*) is given:

In June, 1878, Fraulein C. Hagenbeck sent me two cocks of this species for identification, and I will now complete from the living birds the imperfect description given above.

The whole upper surface from hinder margin of forehead to rump, including back and wings, is dark ashy, almost greenish, and tinged with reddish on the shoulders (1); crown, paler clear grey-brown (2); forehead streak, lores, eyebrows, sides of head and neck, breast, upper part of belly, rump and upper tail-coverts dark vinous-red (3); tail feathers blackish-brown, the outer ones bordered at the base with dull red; lower abdomen, sides of breasts and belly dull red, showing (4) the brownish-ash-grey basal halves of the feathers; vent and under tail-coverts pale yellowish-grey. The whole breast is marked with numerous delicate white spots, each of which has a narrow dark upper margin. Under surface of wings is light ashy-grey, under wing-coverts light yellowish-grey. Bill, a glossy deep-red, with a delicate white mark from base of lower mandible to the nostril (5), ridge of each portion of bill blackish-brown. Eyes grey, surrounded by a very narrow yellow ring (6); feet brownish flesh-colour.

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(8) *Lagonostica rubricata* of South Africa.

(9) The range and habits of this species are similar to those of the common Firefinch, but it does not come into the villages so much, preferring the surrounding clearings, where it consorts with parties of the comoner species. It is distinctly rare in the Gambia, (more so even than the Vinacious Firefinch), and I have never seen more than three together at a time. Also out of the many thousands of small birds which I must have seen in the cages of the bird-catchers during the last three years out here, there have only been six individuals of this species.

In the female the forehead, crown, nape and the whole of the rest of the upper parts are greyish-brown; lores and cheeks pale red; upper tail-coverts and tail-feathers as in the cock; throat and under surface dull red, the lower belly being isabelline-grey, and the sides and breast of belly ash-grey, washed with reddish, with here and there a white spot on the breast; under

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The description in the B. M. Cat. differs in some details from that given by Dr. Russ, whose description being based as he says on rather limited observation, is not quite accurate in all it's details, but if thus corrected will be found absolutely correct:

(1) "brown." B. M. Cat.

(2) "crown, brown like the back." B. M. Cat.

(3) "deep-pink." B. M. Cat.

(4) "the red of the abdomen becomes paler on abdomen, flanks and "thighs, which are pale brown washed with rosy pink." B. M. Cat.

(5) This whitish mark was not present in any of my specimens, nor is it noted in the Catalogue description.

(6) "Iris pale dusky brown (Heuglin); narrow eye-ring, grey." B. M. Cat.

tail- and under wing-coverts pale isabelline-yellow, under surface of wings ash-grey. Bill as in the male; eyes grey.

In size this bird practically equals the Common Firefinch, which it also closely resembles in general demeanour.

Herr Schmidt from his experience with the species considers it the frailest of all the Astrilds, and writes of it as follows:—"The love-song of the cock is very "pleasing, a shrill, loud, fairly long strain, which he "utters, while dancing round his mate, opening his "beak with lively movements towards her, spreading "out his tail and wagging it to and fro at her feet, as "the Zebra Waxbill does."

Here again is a beautiful bird which is not yet obtainable at the dealers, but which is indeed worth anyone's while making great efforts to obtain. Herr Fockelmann, the Hamburg dealer, tells me that in 1876 he had about twenty head of this species at the Kiel Exhibition, which were nearly all cocks and all recently imported. They have also been at times in the collection of Fraulein Hagenbeck, who has kept one of them for over six months, though it was partially bald, and was not specially looked after, being kept with and treated like the Common Firefinches.

I sincerely trust that any fancier, whose birdroom only possesses a single bird, will attempt to breed from it by pairing it with its near ally, the Common Firefinch.

As regards the names which have been given to this bird, the designations "Red-breasted Astrild or Amaranth (*Rothbrustamarant*, Br.)" are inappropriate, as the bird has a much less noticeably red breast than the Common, Dark-red Australian Firefinch, or indeed all the other species which are commonly called Firefinches. Its main characteristics being the spots, with which not only the sides, but also the whole breast are covered. I have named it from them, "the Spotted Firefinch." Again the Latin name *rufopicta* is by no means a happy one.

(*To be continued*).

Editorial.

NIGHTINGALES BREEDING IN CAPTIVITY:—By the kindness of a correspondent I have been favoured with the following information with reference to my note at the foot of Dr. Greene's article in the issue of last month. The gentleman who made a speciality of breeding these birds was, as I thought, an inhabitant of Kidderminster, a Mr. Jeffrey, living in Mill Street. His aviaries appear to have been of much the same architectural character as my own—just a range of open sheds and enclosures, in which he grew various shrubs and plants. In each compartment was a single pair of birds, and they generally built their nests at the foot of one of the bushes (preferably a privet), in the manner mentioned by Dr. Greene.

A small stream of water coursed from end to end of the aviaries, so that, what with this and the growing plants, the Nightingales could hardly have wished for a better imitation of their natural surroundings. For some years, at any rate, their owner is said to have been successful in breeding them, and in getting the young reared.

BACTERIOLOGY v. RATS AND MICE:—Following on my notes on this subject in Vol. IV., it may be of interest if I detail my own experience. My house, an old one, covering a good deal of ground, had been greatly infested with mice for many years—at any rate as long as I have known it. So numerous were they, especially in the winter time, that they would scamper about the rooms, even the bed rooms, in the presence of human beings; while the noise they made at night behind the wainscotting and under the floors was exceedingly disconcerting to anyone engaged in either study or literary work. Such birds as I keep in cages suffered greatly from their attentions, for no sooner did one leave the room than the seed boxes were invaded by the unwelcome marauders, who indeed did not always trouble to scurry away on one's return, but would sometimes actually remain where they were until active attempts were made to dislodge them.

From time to time I tried traps of all kinds, including the American water trap which automatically re-sets itself after each capture. With all of them there was a greater or less measure of success for a time, till the cunning little wretches became suspicious of them, when they became useless. Then I got a cat—to be accurate I have had two cats, the latter of which was an excellent mouser, and always caught seven or eight a day; but that was no good, because with such a large stock the birth rate always exceeded the death rate.

On February the 8th I used the contents of one tube of mouse virus, using salt and water to suspend it, and then soaking dry pieces of bread with the fluid. These I laid on some of the kitchen shelves, having taken care that no other food was within reach of the mice. The next day the bread had all disappeared, and within a few days the noises made by the mice were appreciably diminished. By the middle of March there was not a single mouse to be seen or heard in any part of the premises, and apparently not one had died in its hidden haunts, or where it could not be got at, for at no time was there the slightest smell. I lay special stress on this fact, because, immediately on the first mention of this virus and its use in the pages of *Cage Birds*, a correspondent of that excellent paper made haste to warn us against it on the grounds of its "unwholesome after effects," a piece of advice, which, coming as it did from a gentleman possessing the ear of the public to a certain extent, might have operated to the disadvantage of many readers, had it not been promptly traversed.

Many of the dead bodies I found on my lawn, plump and fat; and although it is pretty certain that some had been eaten by the inevitable neighbours' cats, at present I see no diminution in the number of these faithful friends, who, like the poor, are always with us.

Although the cure of my veritable plague of mice is absolute for the time being, it is quite possible—indeed probable—that I may be again invaded by stray visitors from neighbouring houses. It would, therefore, seem advisable to present my next door neighbour, who by the way extends his hospitality to rats in his still older house than mine, with the means of helping me to keep my own premises free from the obnoxious *Mus*. The wider the application of the remedy, the greater will be its success.

PATHOLOGY AT THE ZOO :—In the report of the Zoological Society issued in 1904 there appeared a resolution of the Council to appoint a Pathologist, on the grounds that it would be "in the interests of the "animals to make provision for a trained Pathologist, "whose duty should be to study the cause of death, "not only by ordinary *post mortem* examination, but "by the use of the microscope and bacteriological "methods, and to point out not only the cause of "death but also how such deaths might in future be "avoided." This resolution was arrived at after long deliberation on the part of a Special Committee, which, after taking advice in various directions, saw that their proposed course was eminently more adapted to the economics of animal culture than the haphazard method of merely treating symptoms in sick animals on the principle largely of guess work.

There is no doubt whatever that this wise policy on the part of the Council marked the commencement of a new era in the history of the Gardens of the very greatest importance—not only to the keepers of birds and other animals alike, but also incidentally to man himself, as will be presently seen. It involves the principle I have always strenuously fought for—the actual identification of diseases, and the following of them up not only to their immediate, but also their remote causes, and secondly to the probable discovery and adoption of really adequate remedies.

One of the first fruits was the widening adoption of the open-air lodging of birds in the case of many species which hitherto had been incorrectly thought to require the hot house method of treatment. In the Report issued in 1905 we saw that even then it had shown a decided effect for good. "The Parrots and "Parrakeets in the New Canal Bank Aviary have "proved a great delight to visitors, and there has been "a striking decrease in the rate of mortality of those "kept, even throughout the winter, in the open aviary "as compared with those in the heated Parrot "House." And when the Society has extended this system a little wider than they already have, they will see a corresponding progression in the improved effects.

In the report just now issued we find, in the very few lines devoted to this subject, matter of great importance and affording considerable food for thought. Dr. Seligmann finds that "there have been practically "no deaths due to tuberculosis amongst those "monkeys that have been left out of doors, whereas "there has been a marked mortality due to that "cause amongst the monkeys in the heated monkey "house."

Then again there is a point which shows how largely segregation for a lengthy period on the same area affects the incidence of microbal diseases. If we turn to page 282 of Vol. II. of *Bird Notes,* we shall find the account of my *post mortem* examination of a Grey Parrot which had died of mycosis, "a disease "characterised by the presence of the *aspergillus* "*fumigatus* (one of the mould fungi) in the air "passages, air sacs, and sometimes, as in this case, "the lungs." Now this disease, which is fairly frequent amongst Fowls, is so exceedingly rare amongst the typical "cage birds" that out of about 600 of these which I have examined I have found it on only four or five occasions—this Parrot, a Magpie, and a Toucan being the specimens in my memory at the moment. Yet such is the effect of enormous numbers of birds living in turn, generation after generation, in the same enclosures, the same houses, and the same cages, exposed one after another to infection with micro-organisms originally left by an inmate of long ago and since multiplied to an indefinite extent, that "Dr. Seligmann has discovered that the cause of "death of a number of birds is mycosis."

This experience of Dr. Seligmann's is highly important, and shows how powerful a factor is environment. On the one hand more or less old structures reeking with lowly organisms generated under conditions the most favourable to their vigour; on the other hand birds, becoming day by day less and less resistant to the attacks of these organisms by reason of *their* environment being totally different to that which obtained during the evolution of their respective species.

And as with mycosis so we might expect to find with avian tuberculosis, the same environmental influences being of course at work in the case of the latter disease as in the former one. Although in considerably over a thousand cage and aviary birds obtained from small communities, and examined bacteriologically by either Dr. Clarke or myself, not one single case of avian tuberculosis has been observed, yet according to a statement made to me about a year ago by Dr. Hopkinson, derived from what Dr. Seligmann had told him, tuberculosis had been found by the latter amongst the birds at the Zoo. Unfortunately no mention of this is made in the Report, but I hope to find some details in the forthcoming Proceedings of the Society as to the particular species of birds involved, since it will be a very interesting point to observe which of the avian families outside the *Gallinaceæ* are most susceptible to tuberculosis when subjected to the influences above alluded to, and which are so different to those obtaining amongst them when kept as cage birds.

The case of these two avian diseases strongly reminds one of that of Typhus Fever amongst human beings a generation ago. While it was so rarely found, even as a sporadic incidence, among the well-to-do classes or even in thinly populated districts of a mixed character, as to be practically non-existent, and while in certain large and thickly populated centres it actually was non-existent (*e.g.* in Birmingham, where I believe no case is on record), yet in the densely crowded parts of some cities—Dublin and Liverpool to wit—it amounted to a veritable scourge. But with the march of knowledge came more efficient sanitation, and the disease is now often but a memory where once it was rampant.

It is to be hoped that the appointment of a Pathologist will have a like effect at the Zoo, and that in time the Council and Fellows will reap the reward which should accrue to logical far-sighted measures.

There is no mention of any septicæmic disease in the Report.

W. Geo. Creswell.

Post Mortem Reports.

(*Vide Rules*).

CANARY. (Dr. McMath.) This bird died of "egg-binding," or more correctly of inflammation of the oviduct, due to rupture of a thin-shelled egg.

PENNANT PARRAKEET. (Mr. Row.) Imported three years ago as a young bird. Congestion of the liver of some standing was the cause of death. The seeds upon which it had been fed are some of them of too oily a nature, and put too much stress on the organs of digestion to be a good food for constant use. My Parrots of all kinds live principally on canary seed and have all the other foods merely as tit-bits.

GOLDFINCH and BULLFINCH. (Lord Clifton.) These birds died of enteritis, and the history gleaned from the accompanying letter pointed to its being of an infectious, *i.e.* septic nature, but as no microscopical examination could be made while the bodies were fresh, this opinion was uncorroborated. In the event however of any more dying I shall, I hope, be able to make an adequate examination.

THE PENGUINS AT BALLYWALTER PARK.

[To face page 87.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

Memory in a Sparrow.

By R. H. CLARKE, M.A., M.B.

The subject of my remarks is an ordinary London cock Sparrow (*Passer domesticus*), at present residing with Mr. G. R. Turner, F.R.C.S., Surgeon to St. George's Hospital. Nearly nine years ago, some of Mr. Turner's children were walking in Hyde Park with their nurse, and found a little half fledged Sparrow which had fallen out of a nest. They took it home and succeeded in rearing it, and have kept it ever since, and it still enjoys excellent health, though it shows some signs of age. Its head and beak seem to have grown longer; in fact the bird altogether has lost some of the plumpness and roundness of his earlier days, and in various places his feathers are developing a greyer tinge. The bird was made a great pet of, constantly allowed to fly about the room, and on one occasion at least, finding an open window he flew right away, and his safe return in answer to the unremitting prayers of his young friends had a very stimulating effect upon their faith. Associating entirely with human beings from the nest it is not surprising that the bird became wonderfully tame; strangers or people he does not care for he will peck vigorously if their advances are unwelcome, but he never shows the slightest fear, and exhibits unmistakable signs of affection for his friends, greeting them with a peculiar chirp, fluttering his wings, and trying to get out of his cage if he is shut up, and as soon as the door is open flying to them, settling on their hands, arms, and shoulders, conversing with them after his own fashion, refusing to leave them, and if put down anywhere flying back to them at once. He was especially attached to the nurse, who fed him and looked after him a great deal in his early days. About four years ago the nurse left and she had not had an opportunity of revisiting her charges till quite recently. Of course she went to see the bird and he recognised her immediately and greeted her with great effusion. As soon as he saw her he tried to get out of his cage, and on the door being opened flew to her, chirping and fluttering his wings and in every way exhibiting unmistakable signs of pleasure. In fact his recollection of her did not appear a bit less vivid after nearly four years interval than if she had only been away for a week. I don't know whether instances of recollection for such a long period as four years are common among birds; I should not have been surprised if it had occurred in a Parrot or in one of the *corvidæ*, as we all know many stories of exceptional intelligence in these birds, but I have not heard of any very remarkable qualities in Sparrows beyond their vigour, hardihood, and what is often called impudence. No doubt their survival in large numbers in cities where the conditions appear unfavourable to them and the struggle for existence must be acute, points to their possession of special qualities; amongst them we may probably reckon intelligence to be the chief. But they do not possess the attractions of colour and song which might have made them favourite pets, and so perhaps their intelligence has not received the recognition it deserves, or if recognised at all it is not very widely known. Now I daresay many people who are familiar with the sensational stories of intelligence in animals so often met with, might be disposed to give a bird credit for this amount of memory and affection as a matter of course, and regard it altogether as of very little importance; if so they make a great mistake. This opens up a very large question, the importance of which it is difficult to overrate, and which would lead me far beyond the limits of this paper, but I will very briefly refer to one or two points and carry them further on another occasion.

To begin at the root of the matter a very little reflection may satisfy anyone that amongst the peculiarities and defects we can observe in mankind, there is none more remarkable than the indifference with which he regards his instruments of intelligence. What appears to us the vast complex of existence on this planet is directed to its most minute detail by intelligence, that is to say by the brains from which that intelligence emanates. Every defect in those brains in structure or function caused by the errors of heredity and environment, the transient aberrations by alcohol or drugs, by slight injuries, by weak circulation or sleep, and so on, is reflected in the output of intelligence, and in the world of action which subsists on it. Suppose we imagine the result if every individual in the world were embarked in a motor car of the nature of which he was entirely ignorant, knowing nothing of the structure of its works, how to regulate it, how to recognise its defects, or how to correct its vagaries, or even to stop it without smashing it up, and if they were started simultaneously with no further instruction than "go as you please,"—what sort of pandemonium might we anticipate? Would not the first collective effort amongst the survivors of chaos be to investigate the machine to whose actions they were committed? We are more dependent on the integrity of our brains than the occupants of those cars would be on their machines, yet of the functions of the most important centres of our brains we know practically nothing; the number of people who are or ever have been engaged in the investigation of the problem, which is no doubt perfectly soluble, is probably less than is employed in any recognised industry in the world, and a popular lecturer actually told a fashionable audience only the other day that there is no proof that intellectual activity is a function of the brain. Let us hope the new labour members may see the necessity of providing some form of elementary instruction for the upper classes in the intervals of bridge, but for those who can think, is it not time they began to acquire some comprehension of the instrument on whose integrity every interest they possess depends? Most people might reasonably reply, "It may be important but I cannot assist; I am no anatomist or physiologist." True—but people who keep birds or other animals have opportunities of assisting; the careful comparison of intellectual function with brain structure in their more or less elementary forms is very important, and at present the material available is both scanty and defective. If half the exhibitions of animal intelligence which have been observed had been simply recorded without embellishment or invention, without substituting inference for fact, but with a plain statement of the evidence, we should now possess a fund of information on the subject of animal intelligence on which we could draw with great advantage, whilst as it is the information available is so blemished with these defects as to be almost valueless.

Dr. Russ on the rarer Firefinches.

Translated with notes from Die fremländischen Stubenvögel
by Dr. E. HOPKINSON, D.S.O., M.B.

(Continued from page 79).

THE DARK-RED FIREFINCH OR SOUTH-AFRICAN FIREFINCH *(L. rubricata)*.

To their enthusiastic friends these little birds are more a source of disappointment than of pleasure (1), as they but seldom appear on the market, and then only to rapidly disappear again like the illusive Will-o'-the-wisp, dying in shoals and leaving us nothing but sorrow at the death of such lovely birds, and regret for the pecuniary loss their mortality has caused us. Some time ago the dealers imported these birds fairly frequently, and it is on such occasions that we can point out with pleasure and pride that Aviculture, and with it the accurate investigation of Natural History, is not less advanced in Germany than it is in other countries, and I am sure that the present rareness of these birds in our shops is not due to ignorance on the part of the large dealers, but simply because there is at the present day so much keenness to buy rarities at the large ports, London, Hamburg, Bordeaux, etc. that just now it happens that they are more freely imported into other countries than into Germany. By constant search they are indeed to be obtained here, but only at a high price.

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(1) I have never kept this species, though in South Africa I have seen them both wild and in captivity, (as cage-birds they seemed to be by no means common), and friends of mine, who kept birds like the St. Helena Waxbill with ease, told me that these birds generally died when caged, so that this seems to show that, even in their native country, they are delicate and difficult to accustom to life in confinement, and one cannot be surprised at the mortality among them when imported.

My first specimen of this species, a cock, I obtained from Mr. Geupel White of Leipsic. This bird's colour was a deep red, darker than that of the Common Firefinch, while the crown, back, wings and whole upper surface were a dark greyish-brown, the vent and under tail coverts being deep black; the loral band, rump and upper tail coverts were a clear red. In size it rather exceeded that of the Common Firefinch.

My bird lived a long time a bachelor in my bird-room, never foregathering with his smaller relations, and even when I let out with him a single hen Common Firefinch he showed no wish to pair with her, and eventually died suddenly in the best of plumage and without any discoverable cause.

Later on, Fraulein Hagenbeck sent some more examples of this species, which had only just been imported and hence were in bad plumage. They were evidently not in full colour, as the colour of their backs was distinctly tinged with greenish, and there were large white spots on the sides of their breasts, whereas my old cock, (which was also in bad plumage when I received him), never showed any marked spots either at first or after he had moulted and assumed his adult dress.

Viellot describes the "Senegali rouge," as he calls this bird, as a sprightly active little creature, and says that the song of a number singing against each other in a cage is pleasing and melodious; they are, however, so quarrelsome that as a rule they should be kept in pairs, or if one wishes to keep several together they must have a very large cage. The nest he describes as placed in a thick bush and built principally of grass and moss; it usually contains four eggs.

So sensitive are these birds to cold during the breeding season and the moult, that the temperature of the bird-room should never be allowed to fall below 80-85 Fahr. at these times, though as a general rule and under ordinary circumstances they do well at a temperature varying between 55 and 65 Fahr.

The habitat of these Firefinches is South Africa, especially Natal and Kaffraria (2), where they are generally distributed, though common nowhere. Heuglin saw them in Bogosland (3) at an elevation of 4-5000 ft. above sea level. flying about in pairs among the bush-covered rocks and kopjes, and he also met with them in the hot low-lying valleys of Gallaland. No further information have travellers or explorers given us regarding them (4).

Outside my own bird-room they have been kept by Mr. Linden, Count York von Wartenburg, Mr. Jaenicke in Hoyerswerda, and Mr. Wiener in London. It seems to be a quiet, shy little bird, which inhabits thick bush, and beyond it's beauty to possess no noteworthy characteristics. When courting, it's antics resemble those of the Common Firefinch, though as an additional attraction to it's mate, it has the habit of spreading out it's tail like a fan. I regret I know no further details respecting it's nesting and breeding habits. Most of those which are imported, more especially the hens, die very soon after their arrival, and even the cocks, after getting through the moult well, are liable to succumb, one after the other, without any very obvious reason. Count York laments a similar fate with his birds, but Mr. Jaenicke seems to have been more fortunate and sends me some interesnotes: "My Dark-red Firefinch," he writes, "has "lived with me for three years; he is an active little "bird, always hopping about the branches and "peeping inquisitively into every cranny; his song "consists of a short strophe, but is pretty loud and "frequently repeated. He once seemed to have a "luke-warm friendship for a hen Cordon Bleu, but "has shown no signs of any attachment to any of my "hen Common Firefinches."

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(2) Eastern Cape Colony and Natal. (Dr. Stark).

(3) Heuglin's birds must have been *L. rufopicta*, *L. rubricata* being confined to South Africa. (E. H.)

(4) In the recently published "Birds of South Africa," by Stark and Sclater, the late Dr. Stark (vol. 1, p. 95) says these birds are generally found in pairs; he further gives some notes on their habits and describes their nest and eggs.

As regards nomenclature, I think that a better name than "Dark-red Firefinch" for this bird would be the "Darker-red," or perhaps better still the simpler "Darker Firefinch." Again, it might be called the "Beautiful Red Senegali" or the "Carmine Waxbill," though this last would be likely to mislead. It is not yet included in the price-lists of the wholesale dealers, though from time to time it occasionally appears in the market, neither is it yet recorded in the lists of the larger Zoological Gardens.

A description of the bird follows here, but as a more complete one, based on the author's later and more extended experience of the species, is given in the Addenda to the volume, I proceed at once to this:

The male has the crown and nape greyish-brown with scarcely any greenish gloss, but distinctly tinged with red; remainder of upper surface dark olive-greenish-brown; wings brownish-grey, each feather having a broad pale outer edge; tail black, the middle feathers with dark-red outer webs, the others uniformly black; upper tail-coverts dark crimson; lores, forehead, eyebrow, face, sides of neck, throat, breast and sides deep crimson with some tiny white spots on the sides of the breast: lower breast and abdomen blackish-brown; thighs and vent black; under tail-coverts rusty black; under wing-coverts brownish isabelline; under surface of wings pale ashy-grey. Bill lead-coloured with blackish tip and cutting edges; eye dark brown, surrounded with yellowish lid-ring; feet dark lead-grey. The female (which has not hitherto been fully described) is above pale grey-brown; forehead and crown dull ashy-grey washed with olive-greenish; a broad loral band, eyebrow and chin light crimson; sides of head reddish-grey; neck, breast, sides of breast and belly reddish-brown with white spots on the sides as in the male; wings brownish grey; tail-feathers black, the middle ones with broad dull red outer webs; upper tail-coverts dark crimson; abdomen ochreous-brown; vent and under tail-coverts black; under surface of tail and wings ashy-grey: bill, feet and eyes as in the male. Length four inches. (Brit. Mus. Catalogue).

In the Addenda Dr. Russ gives some pages on another Firefinch, which he considers to be most probably *L. rhodopearia;* whether he is right in his supposition, I must leave for others to decide, though I must say from the description iven that it seems just likely that these birds were immature specimens of *L. rubricata*.

The letter, a particularly interesting one, describing so faithfully the delights of a mixed aviary, I give in full, as well as the Doctor's remarks on it's subject, omitting however the latter's lengthy description of the two sexes, as what he says as to the difference between Duhring's birds and *L. rubricata* is sufficient for our purpose. Herr Duhring's letter is as follows:

"In the autumn of 1876 I received from a friend, "who had just returned with his ship from the Benguela coast, a number of ornamental finches, among "which were some birds, specimens of which may "have been imported before, but of which I can find "no mention in scientific works. So eager to breed "were these birds, a cock and two hens, that they at "once began to carry nest-stuff into a nest which had "been commenced by a St. Helena Waxbill and then "deserted, a nest fastened beneath a covered basket "hanging in the aviary. The two hens were easily "distinguished, as one was bare on the back, and I "observed that in the morning at 5 or 6 o'clock this "one took the place of the other one on the nest and "sat till about 9 o'clock, when the cock entered the "nest, where he remained till 2 o'clock; at this hour "his place was taken for a short time by the first hen "while he ate and drank, after which he returned till "about 8 o'clock, when the second hen relieved him "and settled herself on the nest for the night; this "routine was carried out regularly every day. Alas, "my hopes were to be grievously dashed! As I mentioned, the birds had built a round nest suspended be-"low a hanging nest-basket, using grass-stems, thread, "bits of rag, feathers etc. to form it's walls, in one side

" of which was a neatly-rounded entrance-hole. It was " hardly finished however before a pair of Cordon " Bleus seized and partially demolished it; the hen " which happened to be sitting at the time did not " seem to mind a bit, but I noticed that the cock " immediately began to busily attempt to repair the " damage. Herr Hald, to whom I was lamenting my " disappointment, advised me to catch and remove " the other birds from the aviary, so that the Fire- " finches might have a better chance of successfully " rearing a brood; I was unable to follow his advice " that day, so I postponed the operation until next " morning, but I regret to say that when the morning " came I let the opportunity slip. The morning after " when I entered the aviary, I saw at once that all " three birds were away from the nest, and when I " looked more closely I saw that this had been com- " pletely destroyed, and that on the ground in the " sand lay five partly incubated eggs. These were " not all the same size, and no doubt both hens had " contributed to the clutch. In shape they were " rather elongated, and in colour white delicately " tinged with pink. I was delighted however to see " the cock had at once commenced to rebuild the " same nest and was already hard at work there, " while the two hens seemed not at all distressed at " the calamity."

Dr. Russ then goes on to say that Herr Duhring kindly sent him the birds he writes about, together with a specimen (for comparison) of the Dark-red Firefinch, the differences between the two being, according to our author, as follows:

The red in the new birds is by no means dark crimson, but distinctly a bright scarlet with a decidedly yellowish tinge. Then the colour of their upper surface is not washed with olive-greenish, but with yellowish; the occiput has no tinge of red, but is a clear ashy grey. Another marked point of difference is that in the Dark-red Firefinch the under tail-coverts are plain rusty black, while in the others they are edged with red; the bill in the new birds is also lighter and bluer. The females too can easily be distinguished, Duhring's bird having an almost orange wash over the plumage.

In reference to the general colour of the two birds, Dr. Russ gives a foot-note for which he is indebted to an artist friend, Herr Meyerbeer, who describes the colour of the Dark-red Firefinch as a crimson, that technically known as true "Vandyke red," while that of the male of the other species is "Caput mortuum red," the hen being ochreous brown. This may interest some of our artistic readers. Dr. Russ then continues thus:

After searching the whole literature of the subject, I have come to the conclusion that this bird is that named by Heuglin *Ægintha* (*Lagonosticta*) *rhodopareia*, although in this bird the vent and under tail-coverts are stated to be black, which is certainly not the case in the birds we are dealing with. I cannot at present be quite sure that this difference is sufficiently marked to neccessitate the separation of Duhring's bird as a valid species. It is to be hoped their possessor will succeed in breeding them, or in the event of their death will be able to get their identity definitely settled. Should they turn out to belong to a new and hitherto undescribed species, I name them Duhring's Firefinch (*Ægintha duhringi*, Rss.), and conclude with a hope that we shall hear more of them in the future.

Birds in the Great Fire which Devastated San Francisco, April 1906.

By Dr. F. W. D'Evelyn, F.G.S. Cal.

In the midst of every tragedy there is a dash of comedy, and the above calamity was no exception. The earthquake struck the city just at dawn, 5.13 a.m. The immediate results were many and serious. Scarcely had the rumble of the temblor and the crash of falling masonry passed away ere a general fire alarm made known to the citizens that a new, and as it ultimately proved to be, a more disastrous agent had intruded its unwelcome presence. From a dozen centres at once flames burst forth, and presently the van-guard of what was soon to become a general exodus appeared, the fleeing householders retreating in sullen reluctance before the advancing flames, which were destined to lay waste one tenth of the city's area and almost seven-eights of the residences.

This cavalcade was a sad sight—smoke-begrimed, fire-scorched, nerve-wrecked ; the sad procession, almost at times shut in by the flames, made for the wider streets and parks. My hotel faced one of these latter, and the late occupants and refugees soon crowded it to its utmost capacity.

Canaries in cages, parrots on broom-handles, cockatoos in gilded aviaries from the wealthy homes already claimed space among the palms and semi-tropical foliage plants. But when the stream of humbler folk joined the current one saw demonstrations of nature study and "out door life" in the pets of all varieties lugged along—precious but serious impedimenta in the struggle to save the bits o' things that went to make up worldly effects.

One dear old lady, whose white hair hung unkempt upon her pallid face, carried a coal-scuttle in one hand and in the other a breeding cage, with nests, seed boxes, and two terror-stricken Canaries. The hygienic condition of the cage would have struck dumb the editor of *Bird Notes*, and it proved beyond argument that the honeymoon of the fair songsters was not an ideal one. Next came a little Italian boy with a stump-tailed Parrakeet hanging by beak and claws to his coat-collar, while he tugged along a demi-john of "foot wine." Later one met with a business-like mechanic with a paper-protected, red-stained cage. In one corner crouched a "Grey Linnet" who at that time, no doubt, yearned for the quiet, gorse-covered moors of dear old Albion.

By noon the flames had devastated an area one mile long by one and a half miles in width; the water mains were broken, the fire absolutely beyond control, the big mercantile houses, banks, churches, and public buildings one sea of seething, blast-furnace conflagration.

On the opposite side of the main street stood the famous "*Call*" building, a magnificent stone structure capped by a restaurant, the loftiest in the world and the resort of all tourists, who enjoy from its windows an unequalled panoramic view of the city, bay, and foot-hills. Alongside this structure were a number of smaller ones, one of which was the famous "Old Crow Whiskey Saloon." The window of this saloon was entirely at the disposal of two crows, who always had a numerous audience outside as they disported themselves on a ten-foot tree stump, ate raw beef, and drank whiskey. One was especially a celebrity;

could talk, whistle, and when drunk outrivalled a vaudeville comedian. This specimen had a crippled wing.

The fire was very intense, and the heat was magnified by the dense smoke-clouds and great showers of sparks. At this time I was in my office, almost directly opposite, and was surprised in the midst of the trouble by the appearance of a large bird, which at first I took for a pigeon, flying out of the fire-zone and lighting upon the window sill. On closer inspection I recognized the sound specimen of the two crows. The poor thing was terror stricken and hung to the heated window for only a moment, and then flew over the corner of the building to an adjacent house top, simply to experience, I am afraid, but a temporary respite from the fiery fate which befell his loquacious companion. The bird had escaped when the heat broke the plate glass window of the saloon.

One of the most extraordinary bird escapes was the case of a Canary. Its cage had been crushed by the falling-in of a building. It was absolutely flat except at one corner, about life-size, in which was imprisoned the bird. This still lives and sings, a bright speck amidst the debris of the stricken city.

My office building lasted, like an oasis in the desert of flame, until after midnight. I was on special duty. I retreated then by the one avenue of escape, already deserted, and ultimately reached the park I spoke of above, and found everything abandoned, birds, chattels, and baggage alike. The military had driven the populace just ahead of the fire as it advanced. Here I had to drop my personal effects—you could have walked a mile or so on the tops of abandoned trunks.

I am pained to relate that half an hour later the poor birds were burned amidst the baggage which had taken fire from the heat of the burning buildings (the famous St. Francis Hotel being among them). I escaped with a partial suit of clothes which I was wearing, and in which I had stowed the April, 1905, copy of *Bird Notes* and the March number of *Cage Birds*, which had been lying upon my desk, and which I snatched up as I said good-bye to my office.

And this is all that remains of my nature Library. But, patient editor and still more patient reader, the story is already too long and I can only conclude in the sentiment of the following:—

A few days before the calamity I visited an old cobbler, a character and a "natural" bird fancier. His store, a large, big windowed room, and window rich in a tapestry of cob-webs, dust, and grime; a dozen or more cages, piled high with seed husks and droppings, occupied by Canaries, native Linnets, "Gold Finches," and some unclassified specimens hung upon the wall—this was the picture presented. His mother wit and instinct took the place (not being a member of the F.B.C.) of fact and science.

In a little wretched cage, rendered even more forbidding by the bright beams of Californian sunshine, hung a solitary specimen of the Sociable Finch, or, as the cobbler said, "soger" Finch. He said "Watch him," and presently the little bird burst into one of those silent rhapsodies of song, accompanied by the expanded tail and odd body movements, so familiar to our members. The old cobbler with a gleam in his eye and a broad, but ungraceful grin upon his rugged face, exclaimed: "Look at him! Look! He is doing his damnedest to be happy." That, Mr. Editor, (with apologies to the Rev. C. D. Farrar) is what we are trying to do in far distant San Francisco.

Wanderings in the Zoo.

By J. E. R. McDonagh, M.R.C.S., F.Z.S.

(*Continued from page* 64.)

In this and the next paper it is my intention to notice the occupants of the Parrot House, but since the Gardens have lately been the recipient of a fine collection of other species, I think I might, for the sake of those who may not have seen the announcements in the press, just say a word or two about some of the birds from the Earl of Crawford's yacht "Valhalla."

Among these birds, of which many are quite new to us, are a Black Hangnest from South America, three thrush-like Bulbuls, known as the Thick-billed Bulbul (*Ixocincla crassirostris*), and only found in the Seychelles, three Cholmley's Rock Partridges, six Bocage's Red-eyed Doves, four Hemprich's Gulls, and two Sacred Ibises from the Aldabra Islands, rented by Lord Rothschild. These last birds are always to be seen in the large Aviary, and they breed nearly every year in the Gardens. Their name of "Sacred" is derived from their having been objects of worship among the ancient Egyptians, and mummified specimens are commonly met with. The Hemprich's Gull is a fine species, hitherto unknown here; it has dark brown upper parts, white front, black feet, and a yellow bill tipped with bright red; and, unlike most gulls, prefers a hot climate, being found on the shores of the Arabian Sea.

* * * * * *

The first Parrot House was built in 1833, just five or six years after the foundation of the Society. Then in 1851 a house was built for Mr. Gould's collection of Humming Birds—which adorns the gallery of the Natural History Museum—and this house was subsequently converted into a Parrot House. In 1880 it was reconstructed, and last year new cages to the number of seven were built on to it, part of them being out in the open and part shut in for sleeping purposes etc. These seven cages are inhabited by about 23 birds, including the Grand and the Cardinal Eclectus, and specimens of the Red-sided and Westermann's Eclectus are to be seen inside. The *Eclecti* are a branch of the family *Psittacidæ* and aroused a good deal of attention some years ago because of the great difference in colouring between the males and females. The adult males are green, the adult females bright red, and the young of both sexes are reddish, without any indication of green even in the young male.

In one of the cages are three Black-headed Caiques; then we come to two Pale-headed Parrakeets, two Red-winged Parrakeets and three Yellow-vented Parrakeets. With seven Varied Lorikeets and four Red-collared Lorikeets, the occupants of the outside cages come to an end.

Inside there are no less than 150 representatives of the large order *Psittaciformes*; and besides these there are about two dozen cages full of foreign finches.

Being so crowded, the inmates of the Parrot

House, (some of them being the most lovely birds in creation as regards colouring,) do not appear to receive that amount of attention of which they are worthy; perhaps the noise drives people away as soon as they have entered, or perhaps people are not so fond of parrots as of other birds; nevertheless no one can fail to notice the lovely Macaws—a row of twelve of all colours of the rainbow chained to perches instead of being kept in cages, and which are arrayed outside when the weather is suitable. The meaning or origin of the word Macaw, formerly spelt "Maccaw," is obscure. It is probably an aboriginal name. The Blue and Yellow species is the one most often seen in captivity and a Crystal Palace show is now seldom without one; then comes the Red and Blue; others are rarely kept in private houses. There are three Macaws in cages, the Noble, the Severe, and Spix, as they are called. The two former are green and very much smaller than those previously mentioned.

The Cockatoos number fourteen, including the Roseate, Sulphur, and Citron-crested, and the Greater White Crested, Leadbeater's, Slender-billed, Triton, Ducorp's, Blood-stained, and Goffin's Cockatoo. "Cockatoo" is a very old-established word, having been in use with some slight modification of spelling for over 200 years, and was undoubtedly taken from the cry. The Malay word is Kakatua. The Triton has the naked skin round the eye blue instead of white, otherwise it resembles the Sulphur-crested.

(*To be continued*).

Editorial.

SCIENCE AND AVICULTURE:—A correspondence has been going on lately in our contemporary, *The Avicultural Magazine*, in which my name appeared, but in which it did not seem advisable for me to take part, seeing that I met with as much less than justice on the one side as more than justice on the other. Now however that it is probably at an end I shall send a short and uncontroversial letter to set both parties right on certain points of fact, and that these points of fact may be made as widely known as possible, I propose briefly to allude to them here.

A certain good friend of mine wrote with the desire of calling attention to various matters connected with what might be called avicultural "Reform," and which during the last eight or ten years have been more or less before the avicultural world. As a consequence probably of my earnest and constant efforts for the last three years in our own small circle of bird lovers as a propagandist of doctrines I know to be true, there is a general tendency to associate me rather too intimately with the doctrines themselves, and my friend therefore spoke of the various conclusions as though they were definitely mine and mine only.

I was not the discoverer of Septicæmia in birds, nor of the fact that it is by most people mistaken for Tuberculosis, nor of the fact that there is often an intimate connection between it and egg food. Those of our members who have Vols. II., III. and IV. of *Bird Notes* can easily satisfy themselves of this. Although, as has been repeatedly stated by Dr.

Clarke, different animal Septicæmias in general had been noticed and described by others, it was he who first studied and worked out the pathology of the disease in birds. This he did in its entirety; its histological characters, the similarity or identity of its bacillus with that found in putrefying egg, the manner of its production, the infection and inoculation with it of previously healthy birds, both domestic and wild, its characters when transmitted to rodents, the effects of drugs both on cultures and on living birds, all these points and others, constituting a long and laborious original research, were established by him years before I had the pleasure and advantage of his friendship, as will be seen by my numerous quotations and references thereto in the "Story of Bird-Death." When, having my attention drawn by an allusion in the press to his work, I made his acquaintance, he was good enough to place at my disposal the stores of material and evidence he had accumulated, and both then and since has given me every help in his power, with the result that during my search for tuberculosis, I have found nothing but a verification of his conclusions. That, and the missionary work among aviculturists which has aroused such mixed expressions of feeling, is my connection with the subject, and so far I hold myself identified with it.

As regards the value of fresh air and aseptic conditions:—there again I lay no claim to originality. That "fresh air is of more importance to birds than "warmth has long been known to most aviculturists" is perfectly true,—as the Editor of *The Avicultural Magazine* tells us. It was—I am sure—known to most intelligent aviculturists long before I began to write. But that few of these aviculturists have insisted on the point is equally true, and that there is need even now of this insistence on the part of somebody or other is shown by the following passage, taken from an article which appeared in the same magazine last month from the pen of a prominent keeper of birds,—"The one great danger to be guarded against "is—FRESH AIR!!! Say what you like, with delicate "birds, *Fresh air kills*, while a stuffy atmosphere, "objectionable though it be, need not do so, nor need "it sow the seeds of disease or impair the health."

As regards the necessity of microscopical examination in correctly determining the cause of a bird's death:—that is merely a corollary to Dr. Clarke's work, and as such would be apparent to any medical man with any knowledge of modern medical requirements. So there again I can lay no claim to originality.

These last two points belong therefore to anybody and everybody who has ever read any modern medicine or paid any attention to modern hygiene: the first belongs in its entirety to Dr. Clarke. My part has lain in recognizing truths when I saw them, and in passing them on to others. With that I am content.

COLOUR CHANGE IN THE SEPOY FINCH: —Mr. Castle-Sloane tells me that since he wrote the paper which appeared in our last issue, the male bird of his pair has lost its brilliant scarlet colour, and is now of an orange yellow with more or less red blotches. This change began to take place at the beginning of the year, and did not seem to be accompanied by any change of feather. One is reminded by this of some other birds in which red tends to be replaced by yellow when in captivity, such as the Redpoll and the Crossbill. A few years ago one of the latter birds came into my possession while in its first feather, and although a male bird and kept in an outdoor aviary, it never even assumed its proper colour, but put on the greenish yellow of the female at its first moult. It soon afterwards unfortunately escaped.

COLOUR VARIATION IN THE FIREFINCH:—Dr. Hopkinson writes to me on May 4 as follows:—"I have got a few rather interesting birds. . . . "about two dozen of the rarer Firefinches, including "a colour variety of the Common Firefinch, real "orange colour instead of red. Caught half coloured "in this state, so the tendency to get pale cannot be "the result of captivity as I always thought. Russ "describes a similar bird he had one specimen of from "Benguela as a distinct species, but I suppose it was "really only an abnormally feathered individual."

For certain "reds" in avian colouration to be replaced by their subsidiary yellows is no uncommon occurrence. In those varieties of fancy pigeons in which yellows and creams are found, and are recognized as standard colours, it is a matter of frequent procedure to breed yellows and reds together, for the purpose of keeping up the depth of the yellow. And all through these varieties the yellow subvarieties appear to have been the last established, and to be the easiest to lose.

GREY AND GREEN SINGING FINCH HYBRIDS:—In Mr. Dart's aviary are to be seen three specimens of this hybrid flying about in their first feather. The cross itself is not perhaps so difficult to get, and it has been recorded on more than one occasion, but in this particular case there is a point of some interest. In the same compartment as in which the grey male and green female parents of these hybrids are living, there are also three other Green Singing Finches, a cock and two hens. It is usually thought that it is impossible to hybridize with any hen so long as a male of her own species is in the same enclosure, but here at any rate that rule has been set on one side, for not only are the two households palpably quite distinct, but the young birds also show their parentage beyond any dispute.

PERSONAL:—The readers of *Bird Notes* will join with me in congratulating Dr. D'Evelyn on his having escaped the dangers and terrors of the awful fire at San Francisco, so graphically described in the paper he has been kind enough to contribute to our pages. At the same time our sympathies go out to him for his loss of home and all worldly effects, and also our hopes that he may soon find an enhanced prosperity springing up out of the ashes of misfortune.

W. GEO. CRESWELL.

Review.

A Pocket-Book of British Birds. By E. F. M. Elms. Small 8vo., cloth, 2/6. *West, Newman & Co.* 1906.

In seeking the suffrages of the ornithological public by the presentation of this little book to its notice, the author deserves every success. Strongly enough bound to stand pocket wear, printed on good, easily handled paper, and withal only three-eighths of an inch in thickness, it yet contains 143 pages teeming with just the information that a field rambler requires. And not only the field rambler will find it useful;—as a book of ready reference in the study it can be highly commended by reason of the particularly systematic manner in which the information is arranged.

The following extract, taken at random, will serve as a good illustration of the *multum in parvo* character of Mr. Elms' judicious compilation.

WOOD WARBLER OR WOOD WREN.

(*Phylloscopus sibilatrix*).

Migrant; April to September. Generally distributed; local in Scotland, rare in Ireland.

Haunts.—As last, but essentially a bird of the woods.

Observation.—Distinguished from its congeners by its larger size, brighter appearance, and rather longer wings.

Plumage.—Superciliary streak over eyes bright yellow. Chin, throat, and breast white, suffused with yellow; upper parts yellowish green; wings greyish brown, edged with yellowish and tipped with white. Belly white. Rump and thighs yellow. Bill and legs brown. Length 5¼in. Female similar. Young, yellower than adults.

Language.—Song, clear and sweet, beginning slowly, then becoming faster, and ending in a tremulous, sibilous note, thus—"twit-twit-twit-tit-tit-tit-ti-ti-ti-i-i-i." Call note, "tee-er." Alarm note, "pi-o."

Habits.—Very similar to last two. Very restless and active in its movements. Specially fond of beech and oak trees.

Food.—Insects and their larvæ. Small soft fruits.

Nest.—May. Probably one brood only.

Site.—On or very near the ground, well concealed by growing herbage, and nearly always in a wood, copse, or the like.

Materials.—Dead leaves, grass, and moss, lined with finer grass and horse hair. *Note.*—Feathers never used as a lining like the last two. Nest cave-shaped.

Eggs.—Five to seven. White, well spotted and speckled with dark brown and purplish grey. Often zoned.

Such is the excellent method with which the author treats those birds which are regular inhabitants or more or less regular visitors. As an example of his tersely informative manner when speaking of our rarer birds we append the following :—

RED-NECKED GREBE

(*Podiceps griseigena*).

A rare winter visitor to our coasts, sometimes appearing in considerable numbers. It has a small, almost black crest, lost in winter; the cheeks and throat are greyish white, and the upper parts dark brown, with conspicuous white patch on the secondaries. Front of neck chestnut red; under parts silky white. Length 18in. In general habits, language, and food it resembles the last. It breeds in sub-Arctic regions.

Mr. Elms rightly prefers the field glass to the gun as his weapon of aggression, and makes a very pertinent remark to the effect that he would like to see "fewer obituary notices of birds in the papers "devoted to Ornithology."

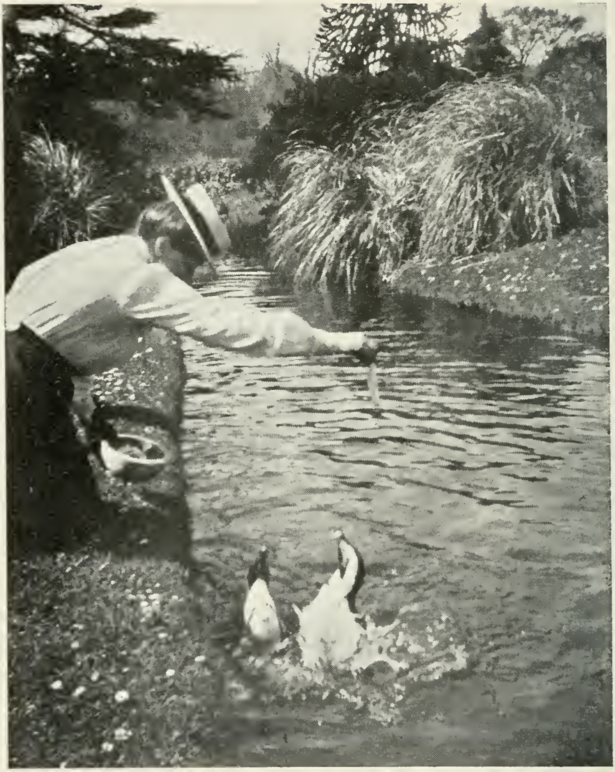
Post Mortem Reports.

(*Vide Rules*).

BLACKBIRD. (Mr. Howe).) There was nothing infectious in this case. The liver had been congested a long time and was affected in parts with a fatty degeneration.

BULLFINCH. (Mrs. Miller.) This bird, like many of its species when captive, died from the remote effects of over eating, the immediate cause being apoplexy.

CORDON BLEU and ORANGE-CHEEKED WAXBILL. (Mrs. Vernon). These birds, both recently purchased, died of enteritis.



LADY DUNLEATH FEEDING
THE PENGUINS.

[To face page 113.

Greenfinch. (Mrs. McAdam). Very emaciated, this bird had old established disease of the liver, congestion of this organ having resulted in fatty degeneration.

W. Geo. Creswell.

Correspondence.

PENGUINS, ETC., AT BALLYWALTER PARK.

Sir,—My birds have come through the winter very well on the whole. This year I took the Cordon Bleus into the conservatory aviary as I found if left out during the winter they did not breed well in the summer. The only new birds in my aviary are a Yellow-backed Whydah which I bought in Paris from M. Traverser, 24, Quai du Louvre—I mention the name and address as I was particularly impressed by the way he kept his birds—very clean and not overcrowded and very few sickly ones among them. I am sure that if other dealers took as much care of the health of their birds there would be far less disease and death. I have always found his birds strong and healthy. My other new bird is a lovely Waxwing given me by a man in Belfast to whom it was sent by a man in Russia, and who had no means of keeping it. At the moment of writing I have had it ten days, and it looks the picture of health and beauty. I turned it out in the aviary at once. It feeds on currants (dried) and fruit.

I still have my two Flamingoes, one white and one pink,—quite tame, and three pairs of Canadian Geese. The two young ones that were reared last year flew away in November, and three weeks ago a magnificient gander appeared among the others, and we suppose it was one of those that flew away returning to its home, but we could not catch it and the others have driven it away. I have also two Penguins—they are most charming birds and very amusing—I first brought one over at Easter from Hamlyn, and we had great difficulty in feeding it. It was absolutely fearless and would bite very hard if caught. We had to catch it every day and open its beak to put a piece of fish and raw meat down; after a week I sent for a companion for it. It arrived, a smaller and very spritely bird, in two days it began to take fish out of my hand and in a week they both dived into the water for pieces thrown in for them. They swim and dive magnificiently and when dry they go back into their shed of their own accord. They follow us about, and the other day one was found sitting bolt upright in the smoking room, having come into the house through the conservatory.

I have also three Sheldrakes and some imported Canadian Turkeys, a good many Wild Ducks and East Indian Green Ducks and one pair of White Callducks. Water hens come up from the stream and feed with all my birds and are quite tame; the ducks make their nests in the woods and pampas grass, and we put them and their young ones in a rat-proof enclosure as soon as they bring them out.

I also have some Silver Pheasants.

All these birds are loose in the Park, and I feed them every morning. I have not mentioned the pigeons which also join the happy family—Tumblers, Runts, White Fantails and Pouters.

I am sorry to say I have never succeeded in rearing any Gouldians. So many have died with me when in magnificent plumage and seemingly good health, both out of doors and indoors, that I have given them up. Once a Red-headed pair built in the outdoor aviary, but a Parrakeet got in by accident and killed the hen and all her young ones, and I have never succeeded in inducing them to build again. I hope to have more news for you at the end of the season.

N. L. F. DUNLEATH.

[The readers of *Bird Notes* cannot fail to be charmed with Lady Dunleath's delightful photographs of the very uncommon pets which she has succeeded in taming. From a private letter I gather that these specimens are examples of the Black-footed or Cape Penguin *(Spheniscus demersus)*, a species found at the Cape of Good Hope, and the only one, I believe, that is encountered so far north. Very interesting descriptions of the breeding "rookeries" of Penguins are given in Captain Scott's account of his Antarctic explorations.—ED.]

Re MACAWS.

SIR,—I am desirous of keeping a Macaw. Would any or your readers be kind enough to inform me which species is to be most recommended as a talker and generally speaking as a pet? Should these birds be kept on stands or in cages?

Any further information of any kind with regard to them and their management would be much appreciated, for instance probable price, and how they are to be obtained.

GRASSHOPPER.

[The above letter has been referred to Mr. Camps, who kindly replies as follows.—ED.]

SIR,—There are four or five species of the Macaw imported into this country, all of which I have kept except the "All Blue."

If, as your correspondent says, he wants a talker I should recommend the Blue and Yellow, since these I have found usually make the best linguists. They are capable of repeating short sentences, but their capacity is not very great. They shriek terribly at times, and are generally of a spiteful disposition. If it is decided to purchase one, care should be taken that it is quite tame and can be handled; otherwise its owner may have trouble, as old birds are very spiteful.

It is not advisable to keep a Macaw in a cage because his gorgeous tail will certainly be spoiled, and the soiled condition of the cage would become a nuisance. The bird should be on a stand, fastened with a ring on foot and chained. I have kept them in this manner in perfect condition.

With reference to feeding, this should be the same as for an Amazon Parrot,—hemp, maize and canary seed, monkey nuts and fruit of any kind in season. Water of course *ad lib.* I shall be pleased to give any further particulars required.

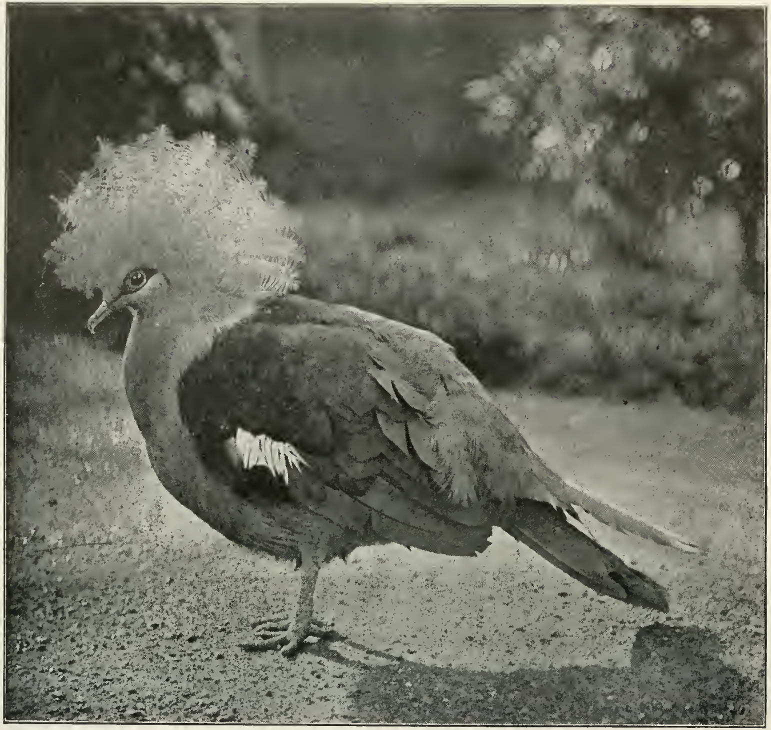
H. T. T. CAMPS.

BIRDS IN EAST AFRICA.

SIR,—Reading "The East African Protectorate," the valuable book published last year by Sir Charles Eliot, the late Commissioner for the Protectorate, I found the following interesting passage in the chapter devoted to the animals of that part of the Continent.

"With some striking exceptions, the birds of East Africa "are remarkable for their large size rather than for their "numbers or their brilliant plumage. Besides Ostriches, there "may generally be seen from the Uganda Railway, between "Makindu and Nairobi and in the Rift Valley, large Storks and "Bustards, as well as an occasional Secretary bird. On the "borders of lakes and rivers, waterbirds—Cranes, Pelicans, or "Flamingoes, according to the locality—are generally present "in enormous crowds. Particularly beautiful are the Crowned "Cranes and the snow-white Egrets. A very conspicuous bird "in the uplands at some times of the year is Jackson's "Weaver. The male, which has immensely long tail feathers "that give him somewhat the appearance of a flying tadpole, is "generally accompanied by a whole harem of females, before "whom he is said to display his charms by dancing in a specially "constructed bower or playground. A characteristic inhabitant "of the lower forests is the Hornbill, a large bird with a huge "beak. It is of very friendly disposition, and will follow a "caravan for many miles, chattering all the time. Among "game birds, whose flesh affords excellent eating, may be "mentioned the Kanga or Guinea-fowl, the Lesser Bustard, "wild Pigeons, and various kinds of Spur-fowl, belonging, I "believe, to different genera from those found in other parts "of the world."

"FOREST OF DEAN."



THE GREAT CROWNED PIGEON

(Goura Coronata).

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BIRD NOTES:
THE JOURNAL OF
THE FOREIGN BIRD CLUB.

The Great Crowned Pigeon.

(*Goura coronata*)

By W. Geo. Creswell.

The imposing looking bird which is here figured by the kind permission of our Vice-President, Dr. Chalmers Mitchell, may be regarded as the type of a group of seven species, which according to some ornithologists constitute one of the four subfamilies into which they divide the Columbidæ. The other six species are *G. sclateri*, *G. albertisii*, *G. scheepmakeri*, *G. victoria*, *G. beccarii*, and *G. cinerea*. They are all inhabitants of New Guinea, and appear each of them to favour some special quarter of that great island and its surrounding smaller islands in the matter of habitat.

The particular species under notice is of very large size, being from 29 to 31 inches in length; its habits are terrestrial rather than arboreal; and in common with its closely related congeners it lays only one egg to a nest. The delicately laced crest is not the least striking of its attractive characters, but it is not always that it can be seen to such advantage as might be inferred from Mr. Dando's charming photograph, for this gentleman tells me that he waited—I think he said some hours—at any rate a considerable time before he was fortunate enough to secure the negative.

In a curious book written and published in 1858 by John M. Eaton may be found a description of this bird, "extracted from the learned and excellent work, "the Naturalist's Library (Ornithology), Vol. 5; Galli-"naceous Birds, Part 3—Pigeons.—By PRIDEAUX "SELBY, Esq." From this we learn that the voice of the male is "a hoarse murmuring or cooing, accom-"panied by a noise seemingly produced by the com-"pression or forcible ejection of the air contained "within the thorax, something similar to that so "frequently heard from the turkey."

Eaton also gives a coloured plate of the bird by Dean Wolstenholme of by no means indifferent merit, considering the date of its appearance, and in his inimitably quaint diction furnishes us with items of some interest as to its value in this country so far back as 1851. "At the sale of the late Earl of Derby, at "Knowsley, 1851, lot 461 was five of these Crowned "Pigeons. I have seen them; they are very hand-"some; they do not appear to have bred at Knowsley, "or any place I am aware of in this country. . . . .

"Since writing the last paragraph . . . . I was in "company with my brother fancier, M. CORKER; we "had to pass through Leadenhall Market, made up "our minds to call on Mr. CASTANG, 'for Auld Lang "Syne' as a matter of course, over which Fanciers "have no control, the Fancy was uppermost, talking "of the greatest weight of Runts, the idea came into "my head of the great Crown Pigeon (I saw, I believe, "at the Baker Street Bazaar, Poultry and Pigeon "Show), I asked Mr. CORKER and Mr. CASTANG if "they could give me the weight of the great Crowned "Pigeon, I mentioned five were sold at the sale of "the late spirited Fancier the Earl of Derby. Mr. "GASTANG went into his counting-house and brought "out the catalogue, I referred him to lot 461, he was "at the sale, I could not go, it was arranged at the "sale to divide the birds, one lot a pair sold for twenty-"pounds, the lot of three sold for thirty-pounds, to "return to the weight of a pair of these birds, Mr. "CASTANG said; to the best of his recollection, they "were the size of middling turkeys, he thought they "would weigh about sixteen pounds per pair, . . ."

In contrast with the above prices it is interesting to note that last year a pair was bought, to the best of my recollection, by one of our members for eight pounds from a Florentine dealer.

According to Professor Newton the name Goura is presumably of Eastern origin and was given to this bird by Sonnerat in 1776. This authority states that it has been bred in captivity but "has as yet evinced "no readiness to domestication, which is to be re-"gretted when we consider its large size and the "becoming appearance it makes with its erect crest, "its colouring of lavender-grey with a chestnut mantle "and white wing-patch, to say nothing of its stately "gait."

Intelligence in Birds and other Animals.

By R. H. Clarke, M.A., M.B.

There are a few more observations I may perhaps be allowed to make on the subject I referred to last month, and I will anticipate a probable objection, that I am going beyond the generally recognised limits of ornithology, by saying that if such matters are foreign to ornithology I don't think they ought to be, and I will give my reasons, premising however that my explanation is addressed to those who breed or keep birds not as "fanciers" for the market and the show room, but as genuine amateurs, whose pleasure it is to study their pets without considering their value in cash or prizes. To such people the exhibition of character and intelligence in their animals is always interesting, and I do not suppose that their interest is diminished by realising that many traits which appear simple, and even commonplace, may be of scientific value.

In the first place, experience shows that progress in biology depends upon the simultaneous study of structure and function; it is no use pursuing one without the other; and at the present time there is a tendency for the investigation of the structures of the nervous centres to outstrip the study of their functions. Then there is a peculiarity about intelligent acts, that they require to be performed naturally and spontaneously; they cannot be reproduced at will like many physiological functions under the conditions of an artificial experiment, and the opportunities of observing them may only occur to those who can spend long hours in watching their animals in fairly natural conditions. Partly from such difficulties, and also from want of care in making and recording observations, much valuable information has been wasted, and it may be useful to point out to those who have opportunities of observation, errors which have caused the waste of material I have mentioned, and to suggest precautions which careful observers should never neglect, in the hope that some readers may be induced to turn their opportunities to account.

At the outset it is well to recommend caution in dealing with anything exceptional or sensational lest it should prove to be a mare's nest, but anyone may encounter something extraordinary, and if that should be our fortune we should be content to record the fact in the simplest way, avoiding embellishment and exaggeration, and what is still more dangerous, the substitution of inference for fact, and having submitted the evidence as impartially as possible, let us leave the reader to judge for himself and draw his own conclusions. It is well to remember that evidence which tends to establish the existence of some well defined quality is especially valuable; as examples, I may mention instinct, where there is no conscious intention, and reason, where there is evidence of an inductive faculty and calculated purpose. Then again memory, affection, (and this may be sexual or independent of such attraction), jealousy, hatred, and so on. It is a definite step to know whether a bird or animal possesses any of these qualities or not.

When any fresh fact is observed it is desirable to repeat the circumstances if possible, and if this can be done several times all the better, as opportunities are afforded for correcting error if by any chance it has crept in. It is difficult, and perhaps impossible in some cases, to distinguish between automatic and intelligent acts, for instance the faculty of talking possessed by Parrots and other birds; which is it? It is generally considered automatic, but many people who have kept these birds are very positive that they understand at least some of the things they say, and they give instances which are difficult to explain otherwise. The complete solution of this question may be regarded as one of the problems of the future, and its settlement will be facilitated by a careful record of facts.

It is possible that the intelligence of birds may differ somewhat in type as well as in degree from that of the higher mammals. Structurally a bird's brain is of a lower type than the intelligence some of them exhibit might lead us to expect. If we compare drawings of the same size of the brain of a reptile, a bird, and a sheep, it will be seen at once that there is more general resemblance between the brains of the bird and the reptile than of the bird and the sheep, yet few people would admit that a sheep was more intelligent than a parrot. Of course in the first place it is wrong to compare a creature which has been bred for centuries for wool and mutton with a domestic pet. We should compare a wild bird with a wild sheep. Secondly as regards the relation of brain to body weight, the bird has an advantage over the mammal. So there are many factors in the problem, but it is an interesting and important one, and we want every fact that can be collected bearing on the nature and extent of the intelligence of birds.

If records are to possess any value they must be free from faults which disfigure much of the material we possess, and the errors may nearly all be traced to one of three sources, viz.: (1) Love of the marvellous; (2) Confounding inferences or explanations of facts with the facts themselves; and (3) Failure to recognise the proportion which must exist between the probability of an occurrence and the kind of evidence which is required to establish it. These defects are not only the cause of the errors to which I have alluded, but lie at the root of most of the superstitions and quackeries in the world; I will give one or two instances in illustration and support of this statement. A good many years ago I picked up a book on animal intelligence by a distinguished scientific author, I will not mention names as I am only mentioning the matter as an illustration, and have not got the book to refer to. In the preface the author deprecated the fact that we depended for our accounts of animal intelligence on unscientific people who were not accustomed to weigh evidence, and led one to anticipate very different results now that the subject had fallen into competent hands and that all the information would be carefully investigated and might be implicitly relied on. Turning over the leaves I found the story of a cat which used to scatter bread crumbs in a garden, and then lie in wait and pounce on the birds which had been attracted by its ingenious artifice. This interesting occurrence had not been actually observed by the author himself, which was a great pity, but he gave it as authenticated by a thoroughly reliable witness. I went on and presently came to an account of a horse which belonged to the author (as well as the story). This animal used to draw the slide of a corn shoot when it wanted a feed of corn and open a window by pulling a cord *on hot* *nights.* When I got to hot nights I shut the book and have never looked at it since. Horses are mischievous, they are fond of nibbling things, and often lift latches and draw bolts, and nothing is more likely than that a horse should draw the slide of a corn shoot if he could reach it, or pull a cord which opened a window, and he would be as likely to do it on a hot night as a cold one; but the deliberate suggestion of the chain of reasoning which would induce him to do it *because* the night was hot is outrageous, and under the circumstances quite unpardonable. Here we have first the love of the marvellous, and secondly the introduction of inference, and most unwarrantable inference at that, instead of adhering to a plain statement of fact. In contrast with this pretentious error it is refreshing to note the real science conveyed in a remark by one who made no claim to it. Whyte Melville put a sentence into the mouth of a horse dealer "To avoid a falling leaf a horse will jump over a precipice," which shows how shrewd an observer the Major was, and exactly conveys the kind of intellectual defect to which highly bred horses are especially liable. An American horse tamer, who was very clever at teaching horses tricks, used to say "A horse has got two sides to his brain and you must teach both sides or he will only be able to do the trick on one." Which was a wrong explanation, but a true statement of the fact, that a horse has so little imagination that if he is taught a trick on one side, he is unable to make the obvious correction to apply it to the other, and the whole thing must be gone through again.

Error No. 3, viz. disregard of the proportion which evidence should bear to probability is a very common vice. Natural laws are the expression of universal experience, as, all men die, lead sinks in water, etc., for examples, and the truth of such generalisations can only be impugned by an experience as large as that which established them, yet, have we not all seen the hesitation to believe a ghost story, which set such natural laws at defiance, provoke indignant remonstrance from the narrator?

As regards the connexion which should exist between evidence and probability, Huxley gives an admirable illustration; here is the gist of it. If a respectable man informed you that he had seen a piebald horse in Piccadilly, you would accept his statement without demur. If he told you he had seen someone driving a zebra in the same place, you might reasonably look for some corroboration, for zebras in harness are very rare, they are difficult to break—it might have been a horse very like a zebra which only an expert could distinguish. Was your informant an expert? and so on. It might be true, but on the other hand it might not, and you want more evidence before finally accepting it as a fact. But if your informant said he had seen someone driving a centaur you would know that the statement was false, and Huxley said that if Johannes Muller, whom he regarded as the greatest anatomist of his time, had told him he had seen a centaur, he would not have believed him without convincing corroboration, and we must agree that is a fair statement of the case.

The origin of many superstitions might be traced to the time honoured combination of the ignorance of many and the impudence of one. Let us if possible avoid identifying ourselves with either class as students of science, confining ourselves to facts, and such explanations and conclusions based on them as sound logic can justify, and leave fiction and romance to those whom they concern.

The Birds at Wargrave.

By J. E. R. McDonagh, M.R.C.S., F.Z.S.

Wargrave is one of the prettiest spots on the river Thames, lying between Shiplake Lock and Marsh Lock, about two miles above Henley. Although only 33 miles from London the bird life to be seen there is extraordinary, and it would repay anyone interested in ornithology to visit it in order to watch and take records of the birds he would come across in a two or three days holiday. This past Whitsuntide the weather was lovely and the country could not have looked better,—all the trees well out and fresh, showing off their shades of green, all harmonizing most beautifully with one another, and here and there interspersed with some magnificent copper beeches and silver birches, not to mention the flowering trees, such as the may and chesnut in full blossom both red and white, and the guelder rose, with the lovely green grass beneath, all new and decked with numerous different kinds of wild flowers, adding a change of colour to the scene, and the meadows all yellow and white with buttercups and daisies.

Our first day we came across some Swans with five sweet little cygnets not long hatched, of a chinchilla colour and with not at all a "swanny" look about them; the parents seemed tremendously proud of them; and the father was especially pleased with himself, following our punt and trying to get what food he could out of us. The cygnets of all Swans are at first grey, except those of the Polish Swan, which are white and do not assume the adult plumage until they have reached their second winter.

The particular species found on the Thames and other waters in a semi-domesticated state is the Mute Swan (*Cynus olor*), and it is not certain whether the Polish Swan is a distinct species or only a kind of quasi-albino.

Flying overhead all the time were the different species of Hirundines, the Sand-Martins building in holes along the banks, distinguished by their brown colour with white fronts and by being the smallest; the Swallows, brownish-white in front with lovely shotty blue upper part showing off most beautifully in the sun; and finally the Swifts (which by the way are not really Swallows at all) with their forked tails, and of a brownish black all over, except the young ones which show a little white on each feather edge. The power of flight of these birds is extraordinary, and, unlike the Swallow, by reason of the shortness of their legs they are never seen to settle voluntarily on the ground or perch on telegraph wires, &c. It was most interesting to watch the Swallows catching flies, some of them suddenly darting forth and almost touching the water, others quite touching it and then coming up into the air again to fly about in circles as it appeared, often when flying coming so near that one distinctly heard a whirr and turned aside to avoid being hit.

Continuing along the banks we passed the homes of many water fowl among the reeds and sedges, such as the little Dabchick or Lesser Grebe, shy little birds which sometimes ventured out into the middle of the river to give an exhibition of their diving propensities, remaining under the water some time and reappearing in quite unexpected places.

We then disturbed some Moorhens and Coots which immediately got up and flew across the water, making a hideous noise in doing so, while others, braver than the rest, remained playing about quite indifferent to our presence, and apparently knowing full well that no harm would come to them, and what safety the Thames Conservancy has placed them in by adopting their protective bylaws. In many cases birds almost came into the boat or stood quite still along the bank while we passed close by them. Especially did we notice this with regard to the Wagtails, which darted from the bank over the water to catch flies, hovering about all the while first up in the air, then down to the water, and then from side to side. It is really marvellous to see the ease with which these birds catch insects, changing from one position to another with extraordinary alacrity. The Wagtails most commonly seen are the Pied or Water Wagtails and the Yellow Wagtails.

Passing along by the bank under cover of the willows we saw many Tree Creepers running zigzag up the trunks, against which they press their pointed tail feathers to aid them in their climb. They are easily recognised by their small size, fine curved bill, silvery breast and the white spots on the back. They do not descend the trees, but fly from the top of one to the base of another. We found one of their nests in a hole in an old willow, a most perfectly made home, lined with feathers and containing five eggs, white with reddish spots at the larger end. This was a rather late find since they build as a rule early in May, but some say two broods are often reared.

Close by this tree another very interesting spectacle was to be seen—a pair of Starlings rearing their young in a hole in a silver birch. The young family consisted of two, almost full grown, now and then taking a peep at the world they were soon to fly about in, but not yet having the pluck to venture out on their own, big as they looked. But perhaps they were lazy and did not want the bother of finding food for themselves, as the parents were indefatigable in their flying to and fro with choice tit-bits from sunrise to sunset. And what a "to do" there was when the father arrived with a big fat worm! As a rule birds are very shy when feeding their young, but these were quite an exception, for people were continually passing the tree and we sat watching their domestic affairs for some hours, taking photographs of them as well. It was interesting to watch the way the droppings were always deposited outside the hole, so as not to dirty the home inside.

Along this bank we also saw innumerable Thrushes, as tame as could be, Blackbirds, Robins as pretty as usual, and occasionally brave enough to come on to the punt, Flycatchers capturing insects on the wing to devour on their perches—an easy means of recognizing these birds—Garden Warblers, Titmice, (the Long-tailed Tit having the smallest body and proportionately longest tail of the group). The Great Tit, Cole Tit, Marsh Tit and the Blue Tit, all of these were to be seen.

Next to mention the Finches—the Greenfinch, whose song is certainly prettier than most people imagine, but here and there interspersed with some harsh notes, the ubiquitous Sparrow, the beautiful Chaffinch or Bachelor-finch, so called from the fact that the males separate from the females about the time of the Autumn migration, Linnets, Bullfinches and Yellow Ammers.

Other birds we saw were Kingfishers, several members of the Crow tribe, Plovers, making their melancholy noise incessantly as we strolled home late in the evening, and the Cuckoo, more often heard than seen. We were very amused with one of these birds which used to visit the trees in front of the house every morning, calling its mate, getting hoarse after every fifth call or so and then resting awhile to begin again.

Swans on the Thames.

(Reprinted by permission from The Surrey Comet).

Not one of the least interesting features of Thames life is the presence in its waters of the numerous colony of swans, members of which, almost from source to sea, add life and beauty to many picturesque scenes on its banks; yet comparatively few are aware how these graceful birds ever came there or what means are taken to preserve and care for them.

History hath it that the first pair was placed on the river in the dim age when Richard I. ruled the land, that valiant monarch having received them as a present from a great lady in Cyprus—to which island they were then almost solely indigenous—after one of the then periodical crusades in defence of the national religion. During the nine centuries that have elapsed since then there have always been swans on the Thames, and to-day they number between five and six hundred. At one time there were as many as nine hundred swan-owners on the Thames, so that giving each of these the very moderate allowance of one apiece, it is obvious the present number, large though it seems, has been surpassed. Parenthetically, one is led to wonder, how on earth did they know which was whose? There should have been a good opening for a Chaffers, to catalogue the varied marks which owners would have to employ to distinguish between their own property and their neighbours'.

Nowadays the whole of the swans belong to the King, the Vintners' Company and the Dyers' Company, who own, roughly, a third of the total each. It is a little puzzling at first to know how apparently prosaic people like vintners and dyers came to be connected with such a distinctly æsthetic addition to the river. It is explained by the fact that in older days anybody who was anybody—fortunately or unfortunately not being able to indulge in a motor-boat—had a state barge in which he periodically disported himself, and someone with a nice discrimination for art, hit upon this way of imparting a new feature to the water scenes he was thus able to enjoy.

The King, and the two Companies named, appointed not only a Barge-master, but a Swan-marker—offices which have now both merged into one, the holder of which is called the Swan-Master. The owners have each a separate mark for their birds, and every swan on the Thames bears a distinctive badge by which the expert eye knows to which of the three it belongs. This is painlessly scratched with a knife on the upper lip of the beak. In the case of the Royal birds it takes the form of a diamond; the Companies' marks being respectively a downward curve on the edge of both sides of the lip and one such curve with four perpendicular lines alongside. The process of swan-marking, or swan-upping as it is technically termed, takes place towards the end of July, after the breeding season is well over. The three Swan-masters and their assistants proceed up or down the river together, the former in special uniforms somewhat of a naval cut in blue with gold bands, and the latter in sweaters of red (King's), blue and white (Vintners'), and blue (Dyers'); the cygnets are caught, and after being tallied with the Masters' records, marked in the way described.

The breeding season in May lasts some three or four weeks, during which time the male birds evince a certain amount of pugnacity towards intruding boating-parties, though it is rare for them to be the aggressors when due regard is paid by users of the river to the importance (from the swan's point of view) of the occasion. The season is an anxious one, and great care is taken of the mother birds on the various nests by specially-appointed boatmen, who receive a money grant for each cygnet successfully hatched. The average number of young birds to a nest is six—of which about three survive the vicissitudes of early life—though occasionally they number as many as eight, and this year there is an exceptional nest of nine in the neighbourhood of Henley. Similar care is taken of the birds throughout the year. The numerous injuries they receive are regularly doctored, or if they are too severe for that, the bird is destroyed. In winter it is not always easy to keep them alive, although they are taken in and housed in pigstyes and other edifices where they can be sheltered from the cold. The punishment for killing a Thames swan is a severe one, though it is rather difficult to trace the offenders. The maximum penalty is a fine of £5, and in past times, no doubt, it was much heavier than that. It is interesting to note that the swan is the only domesticated bird which can legally inhabit the Thames except by special permission, though the law against the putting of other kinds, such as the harmless, necessary duck is, of course, practically a dead letter. Altogether it will be seen that the expense of swan-keeping is no light one.

The longevity of the Swan is remarkable, its average life being fifty years, which period is occasionally extended to as much as eighty or even ninety years. In spite of this the numbers do not increase appreciably, partly owing to the venturesomeness of the bird, which, as already alluded to, results in a considerable thinning-out. Another cause is found in the fact that thirty of the King's Cygnets each Christmas come to an untimely end not wholly unconnected with epicurean feasts in the halls of some of the highest in the land—which latter fact is, no doubt, some consolation. Others, richly prepared by the art of the chef, go to grace the banquetting boards of the Vintners' and Dyers' Companies every year—their funeral rites being witnessed by their quondam guardian angels, the Swan-Masters, who, in their capacity as Barge-Masters, attend these feasts in quaint and resplendent uniforms.

There are many species of swans, but those placed in the Thames and elsewhere for ornamental purposes, belong (with the exception of the Black Swan) exclusively to one, which is denominated the "Mute Swan." The birds of this species are unquestionably the most handsome and, so to speak, "swanlike" of all. They derive their name from the fact that in the domesticated state they do not vent their emotions noisily, except so far as occasional low sibilant guttural sounds go. In the wild state, however, it is said, they make a curious trumpeting sound similar to that of another species known as the "whooper" or whistling swan. Possibly Tennyson had this in mind when he wrote that weird poem "The Dying Swan," whose

> " . . awful jubilant voice,
> With a music strange and manifold,
> Floated forth on a carol free and bold
> As when a mighty people rejoices."

Another much-admired member of the swan-tribe is the Australian Black Swan with its glossy feathers and bright red beak. The Vintners' Company own the only specimens on the Thames, at Goring, where a colony, the numbers of which are kept strictly to thirty, is placed. These birds, though good-looking, are both vain and vicious, and will have nothing whatever to do with their white neighbours. The much-maligned English climate would seem to have affected their temper, for they feel the cold intensely. The first pair brought over in comparatively recent times quickly perished, and great care has to be taken of the existing birds to keep them alive during the winter. The number of the Vintners' Black Swans is limited as stated, by the giving away of the surplus birds to such municipal and private owners of ornamental waters as may apply for them.

Editorial.

"THE SWAN WITH TWO NECKS," AND OTHER SWANS:—In the next issue of *The Surrey Comet* after that containing the interesting paper reproduced in this number, there appeared the following *apropos* paragraph:—

> Recalling the facts given in last week's "Comet" in reference to the marking of the Thames swans, one is reminded of that seemingly curious anomaly, "The Swan With Two Necks," still perpetuated by tavern signs up and down the country. This curious creation seems to have been regarded as an object of mystery for a long time, and Timbs, in his correction of curious errors, relates how "weak persons" were led by the sign to accredit such anomaly. The mystery is explained in the substitution of a single letter, the sign being nothing but a corruption of "The Swan With Two Nicks" or niches on the bill, by which means they were marked and distinguished by the owners just as they are to-day.
>
> By the way, an interesting addition has been made to the swans on the local reaches of the river during the past few days in the arrival of a couple of full grown birds and five cygnets. Their migration has been accomplished under somewhat unusual circumstances. The birds had brought their little family into the world on a stream which serves a wharf for workshops and warehouses Commercial-road way, and in view of the fear that harm might come to the young through baulks of floating timber, the Vintners' Company were asked to have them removed. Consequently one day towards the

close of last week the Swan-Master to the Vintners went from Kingston, and after judicious reconnoitring—for swans are awkward customers to capture, particularly when the cares of a family are upon them—the old birds were securely sewn into a couple of open flag baskets such as are used by carpenters. In these, possibly to them undignified vehicles, they accomplished the railway journey to Kingston.

In view of the approaching holiday they were for a time quartered at the rear of a well-known Kingston boathouse. Having been released to the freedom of the Thames on Tuesday morning the parent birds have practically lost that greyness of tint naturally associated with a Pimlico stream, and as I saw them last night defending their young against the intrusion of a puppy from the Canbury Gardens, they are assuming airs commensurate with their new aristocratic environment.

There appears however to have been some difficulty attending the satisfactory final adjustment of their new environment to these swans. "From information received" the older swanny inhabitants of the particular reach proved rather more formidable opponents to the new arrivals than the aforesaid puppy dog. I hear that dire strife and trouble was the order of the day for some time, but the ultimate result I have not been able to gather. Probably the cygnets suffered.

THE SHORTAGE OF NIGHTINGALES:—The same newspaper, which by the way is far in advance of most lay journals in the accuracy of its natural history, as may readily be surmised from the fact that W. J. Lucas of Dragon Fly fame is a regular contributor, gives on June 9th the following explanation of the alleged decrease in the number of nightingales.

The "shortage" of nightingales, over which one of the London daily papers was inclined to shed a tear of lamentation on Wednesday last, is really not a new fact to those who have been close students of bird life. A week or two ago we were being informed of innumerable places—many in Surrey—where this sweetest of songsters may be heard, but at the same time I found it authoritatively stated that the number of nightingales that annually visit our shores to bring up their young has been a steadily decreasing quantity for several years. But more disquieting still is one of the reasons advanced. The parts of England specially frequented by these summer visitors are those where fruit growing is one of the staple industries, and it is in these districts that sparrow clubs have become vigorous in the last few years. In many cases the heads only of birds are kept for counting purposes, and, unhappily for the musical brightness of the country side, the brown heads of various warblers easily pass muster among dozens of the common sparrow. Thus it happens that the wholly insectivorous singing birds are yearly sacrificed in great numbers.

One cannot of course vouch for the complete accuracy of this particular item, but it seems on the face of it to be worth some attention.

IS EGG FOOD NEEDED?—Mrs. E. M. Butler writes to me as follows:—". . . . I gave the hen, while "rearing them, Hyde's seed, ants' eggs, oatmeal, and "stale sponge cake, mixed together and given dry, "and the young birds (Canaries) were out on the "perches and flying at three weeks old, and are now "stronger and finer birds than any I have before fed "on egg."

As an antithesis to this plain statement of fact I will now quote from a letter which has recently appeared in a contemporary, over the signature of a gentleman who is already known to fame as the exponent of the doctrine that birds can die by a mere effort of will, whether they are diseased or not:— "I cannot agree with Baron du Theil in his objection "to the use of egg for young birds, because it is an "undoubted fact, attested by all that use it, that the "parents of young birds of all kinds select egg in "preference to all the other ingredients in the soft food "for feeding their young, and if it were injurious they "should instinctively be aware of the fact."

I am not in a position to comment on the reasons of the Baron's objection to egg, his communication on the subject not being at present within my reach, but surely his critic is speaking more than rashly when he so confidently states what he does about the invariability of selection of egg by the parents of young birds "of all kinds." What about the Gouldian Finch, the Desert Trumpeter-Bullfinch, the Budgerigar, and other Parrakeets, the various Doves, etc., etc.?

As to the power of instinctive selection on the part of birds of any particular seed as a curative in disease, or as being least adapted to harm them when diseased, or even as to their instinctive knowledge of what natural foods are likely to harm them, I here say nothing. Birds may have this instinctive knowledge for all I know, and at one time I certainly shared the popular opinion on this subject; but one cannot help seeing that considerable modification of this view may be necessary. Human beings—whose quality of instinct is at least on a par with that of the lower animals, and whose order of intelligence is immeasurably higher—cannot always be trusted to select those substances which are best adapted to their needs. The mother, left to her own devices, "instinctively" selects for her infant just those foods which lead up to the familiar verdict of "Death from improper Feeding." And I do not see that we have much to be thankful for that men as a class "instinctively" select the various forms of alcoholic drinks in preference to those of less seductive attractiveness. But be all this as it may, it is very certain that under no circumstances whatever can birds be "instinctively aware of the fact" that egg is injurious to them, as it is sought to make us believe they would be if it were so, in the vain hope of persuading us that its opponents are wrong. Instinct—avoiding terminological technicalities—may be described as that elementary amount of quasi-intelligence with regard to certain actions which is hereditarily handed down, and which is independent of education and its resulting conscious intention. Lamarck sums it up as "race habit." Where then does the instinct come in which would prompt a captive wild bird to select that to which none of his ancestors ever had access—hard boiled egg? The idea is preposterous. The bird simply likes egg as certain people like *pâté de foie gras,*—but, while the latter are generally advised not to rear their infants on a diet of diseased goose livers, the former are being encouraged in the foolishness of rearing *their* chicks on a food, which physiologically is equally harmful as daily diet, if indeed not more so.

IN MEMORIAM:—My readers will regret to hear of the loss we have sustained by the death on the 5th inst. of our old friend Mr. WIENER. Born sixty-eight years ago, the deceased gentleman has been identified during the greater part of his life with Aviculture, and in many ways has been no inconsiderable power in the advancement of the science to its present position. Twenty-five years ago he was one of the joint-authors of the "Book of Canaries and "undoubted fact, attested by all that use it, that the "parents of young birds of all kinds select egg in "preference to all the other ingredients in the soft food "for feeding their young, and if it were injurious they "should instinctively be aware of the fact."

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Cage Birds," contributing thereto the section on Foreign Birds, recently republished in separate form. Becoming associated with the Foreign Bird Club and the Avicultural Society at early dates in their respective histories, his claims to the respect of their members were in both cases recognized by his speedy advancement to the Vice-Presidency, positions which he filled with an unassuming dignity and honesty of purpose that endeared him even to those who were not always in agreement with his opinions.

W. GEO. CRESWELL.

Review.

The Birds of the British Islands. By Charles Stonham, C.M.G. F.R.C.S., F.Z.S., with illustrations by L. M. Medland, Part I. Roy. Quarto, 7/6. Grant Richards.

The first part of this important work, which has just been published, fully bears out the promise implied in the specimen sheet and plate recently noticed in these pages. Indeed it is difficult to speak of it in sufficiently pronounced terms of praise. Author, Artist, and Publisher are between them giving us a veritable *edition de luxe.* The text consists of a pleasantly and concisely written, yet sufficiently detailed account of the range and habits of each bird, followed by an accurate description of its eggs, plumage, and measurements; the plates are an astonishing revelation of what a black and white plate *can* be in the way of fidelity of portraiture combined with softness of treatment and general artistic merit; while the paper, printing, and general get up of the book are of a quality which is not often met with even in the most expensive publications devoted to either this or any other subject.

The present instalment deals with the Mistle-Thrush, Song-Thrush, Redwing, Fieldfare, Blackbird, Ring-Ouzel, Wheatear, Whinchat, Stonechat, Redstart, Black Redstart, Robin, and Nightingale. The plates are sixteen in number, three of them showing sexual differences as regards the Wheatear, Whinchat, Stonechat, Redstart, and Black Redstart. The immature plumage of the Robin is also the subject of one of the plates.

The work will be complete in 20 parts, and there will probably be a supplement dealing with our rare stragglers.

Post Mortem Reports.

(*Vide Rules*).

DIAMOND SPARROW. (Mrs. Mortimer). Bought a fortnight before death, and never seemed well. Gasped a good deal; beyond this no special symptom. The syrinx and thoracic air sacs showed the velvety appearance due to mycosis, and the right lung itself was invaded by the micro-organism. The bird was a hen.

BAUER'S PARRAKEET, cock. (Mr. Hume.) Had been noticed to be ill for about three weeks. Very thin. Typical Septicæmia was the cause of death, the liver and spleen being full of nodules.

GREEN SINGING FINCH, hen. (Mrs. MacAdam). Beyond a pinker condition of the lungs than is normal there was nothing in this bird to suggest the cause of death. We may assume bronchitis therefore, and that would probably be accounted for by the history of having been kept in a warm room and being suddenly exposed to a draught from the open window on a cold day.

CROSSBILL, cock. (Dr. Master). Chronic congestion of the liver and apoplexy. The death appears to have been heralded by symptoms of cerebral congestion. This bird was interesting from the fact that though cage-moulted he had many red feathers. W. GEO. CRESWELL.

Correspondence.

AN OBLIGING CHAFFINCH.

SIR,—I took a nest of Chaffinches about eight days ago. They are thriving and getting strong. Yesterday I put them out in their cage on the lawn in the sun, and presently a cock Chaffinch flew on to the cage, looked at them, cheeped, and flew off. I was sitting with others close by. In a few minutes he came back, this time his mouth was full of green caterpillars. He tried to get up enough courage to go into the cage, but evidently could not manage it. After trying to get to them every way except by the door, he finally called them up to the bars of the cage and fed them. I left them to him all the afternoon. His wife is sitting somewhere, and I fancy he thought he would try his hand and feed the strangers till his own were ready for his attentions.

E. WARREN VERNON.

BENGALESE HYBRIDS.

SIR,—In my aviary amongst other birds I have a fawn and white Bengalese hen. A cock Spice bird and cock Bronze Mannikin both paid her great attention and assisted in making a nest in a small box hung on the wall. Four eggs were laid, both cocks sitting on the eggs in turns when the hen went off to feed and bathe.

I never expected the eggs to hatch, and thinking they must be unfertile, I looked in the nest to-day (May 23) and to my great surprise, found two young birds, one much larger than the other (a week old I should say) very fat, crop well-filled with egg, no signs of any feathers. I shall be unable to tell with which bird the hen mated until the young ones are out of the nest.

I should also mention that the same three birds built a huge nest of grass and roots in some branches in the flight, the hen Bengalese sitting inside and assisting to twist the grass, etc., brought by the other two birds; then they left this and made the one inside the aviary. HELEN G. BROMET.

[I once had a Canary hen in an aviary with two male companions, a Siskin and a Redpoll. She went to nest and brought up two young ones which were unmistakably the the progeny of the two respective males.—ED.]

A NEST OF BLUE TITS.

SIR,—Having after a good deal of trouble and patient watching at last discovered where a pair of Tits were building under the thatch in a summer house on the tennis lawn, I determined when the young were hatched to let the parents bring them up for me. I therefore put them into a box cage and hung it on a pergola close by. After a vast deal of bad language at me and much fright the mother went in—she is always far braver than the male is. It took me a day to get the cage up into a window, but from that time they fed them all day, and I moved the cage constantly to one room and another, followed by the angry birds. They came right into the rooms and sat on the looking glasses, apparently sleeping there at nights. The young Tits are now able to feed themselves and are, as I write, flying about my room with three Chaffinches, hand-reared this year, and a Canary and Goldfinch, all having their baths. It saves a great deal of trouble if one can get parent birds to feed under such conditions, but there are not many who will. E. W. VERNON.

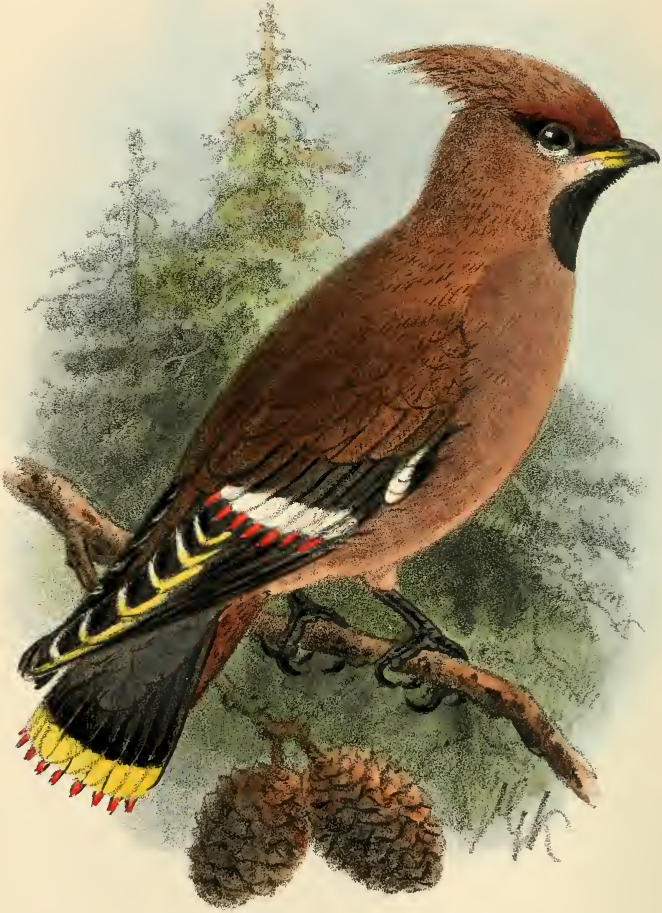
AN ESCAPED CHAFFINCH IN AMERICA.

SIR,—The following extract from a Western Magazine of Ornithology is not uninteresting:—"On Sunday, March the 4th, a Reverend gentleman, somewhat acquainted with local birds, was strolling around his parish, the historical Presidio of Monterey, California. Suddenly there sounded overhead the familar—to British ears—challenge call, 'Pink, Pink;' the Reverend gentleman at once decided this was no ordinary bird, and hastened to secure a weapon;" (think of a Chaplain shooting birds on Sunday), "the bird was re-located in a pine tree and shot."

The skin was forwarded to an expert, but he "was completely non-plussed, as nothing like it had ever come into his collecting experience, and further he was unable to place it from the keys in any of the books on American birds." The bird was forwarded to the Curator of the National Museum at Washington. In America "The West" always calls upon "The East" on any point of "intelligence," probably out of respect to the legendary acceptance "that wise men came from the East." The mystery of the foreigner was promptly cleared up by the information—"it is a Chaffinch—sometimes called the Bachelor Finch—*Fringilla coelebs.*" The writer follows on :—"This bird had no business to be at large in this country, particularly on the Pacific coast—the addition of foreign birds is never desirable, and is often dangerous." Fearing that some Society was importing and liberating foreign birds, the U. S. Department of Agriculture was consulted, and the chief of that Department imparted the information "that the matter was of such importance that it had been taken up as a subject of special legislation; further, in South Australia the Chaffinch, which was introduced some years ago with other European birds, has become so undesirable that under the Game Law of 1900 it is included in the list of injurious birds denied protection." Section 2 of the Lacey Act, requires permits for all foreign birds imported into the United States. "It would be a calamity for any imported species to gain a foot hold amongst our native avifauna." To support this conclusion the direful effects of the Mynah in the Pacific Islands, the Starling and Chaffinch in Australia, and the English Sparrow in the United States are strongly commented upon.

If there was a corresponding Exclusion Act controlling other "biped" foreigners, who are rapidly "acclimatized" into citizens—within forty-eight hours—indifferently to the possibility of "encroaching upon the food-supply of a native species," much of the "undesirable importation" would be, with marked advantage, curtailed, or included in the list of "injurious etc."

POEPHILA CINCTA.



J. G. Keulemans del. et lith.

West, Newman imp.

WAXWING.
Ampelis garrulus.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Waxwing.

(*Ampelis garrulus*).

By W. T. Greene, M.A., M.D., F.Z.S.

Ornithologists of old, as well as at least one dramatist, must have had somewhat hazy notions about geography, or they would not, in the one case, have made Bohemia an island, or, in the other, have coupled its name with that of a bird which is an inhabitant of the circum-polar regions of our hemisphere. However that may be, the Waxwing, as we call it to-day, was formerly known by the name of Bohemian Chatterer. A chatterer—(*Ampelis garrulus*) —most undoubtedly it is, but it has no more connection with the province of the Austrian Empire of which it was given the name, than with our own country, or, indeed, less, for some of these birds visit England almost every winter, arriving sometimes in considerable numbers, which, alas! are sadly reduced by gunners and trappers, before the remnant that escapes takes its departure from our inhospitable shores in the Spring.

Ampelis garrulus, however, if incorrectly named in one case, has another appropriate and descriptive designation, namely, Waxwing, by which it is now generally known, for several of the secondary and tertiary feathers in the wing, as well as, in some instances, the central quills of the tail, are tipped with an appendage about the eighth of an inch in length, of a bright red colour and a waxlike consistency, the use of which is unknown, though, in all probability it has none, and is simply ornamental. Both sexes carry these waxy appendages, so it is not a sexual distinction, though they are certainly fewer in the females than in the males.

The Waxwing bears a good deal of resemblance to the Jay, but is smaller, measuring only eight inches or eight inches and a half in length. The plumage, however, is of the same soft silky texture as that of the Jay, and like the latter bird the Waxwing has a handsome crest, which it can raise and depress at pleasure.

Its general colour is a brownish grey of several shades, darker above than on the lower surface of the body. The quills of the wings and tail are black, and there are white tips to some of the wing coverts, and a yellow edging to the tail. The Waxwing is not a conspicuously handsome bird, nor do its chattering notes commend it much to the notice of amateurs. It is decidedly dull and listless in confinement, but is readily tamed.

Unless the cage in which it is kept is of large size, the soft plumage, which is the bird's chief charm, is quickly spoiled. It may be added that the Waxwing is extremely impatient of heat, as might be expected from its habitat, and suffers much during a warm summer, or if kept in a hot room.

The food of the Waxwing consists of the insects and berries that abound in the bird's native country. On the former it and its young subsist during the short Arctic summer, and on the fruit and berries during the rest of the year, and it is only when the supply of the latter has been exhausted, or been buried too deeply beneath the snow, that the bird forsakes the Arctic for more temperate regions.

The late Mr. Meinertzhagen, whose untimely death at the age of twenty-three years was a distinct loss to the world of science, as well as a deplorable calamity to his friends, found the nest of the Waxwing in Lapland, and obtained some young birds, which, however, did not live to reach England.

The eggs have an olivaceous grey ground, and are speckled and marked with brown of several shades.

In confinement ants' eggs, soaked currants, and minced raisins, will form as good a substitute for the natural food as can be obtained, and if the temperature is regulated to suit its requirements the Waxwing will live for a year or two in this country.

[Mr. Keulemans has been good enough to furnish me with the following notes on this bird.

"I have had many adult specimens with red tips "to the tail, probably very old birds.

"In 1867 Waxwings were very common in Hol-"land during the months of November and December. "Many remained till February 1868, and one pair "built a nest, (which was however taken down by a "gardener), early in that month on a gentleman's "estate near Leyden.

"I had two fine specimens, both males, in a cage "for several months. I found them attractive owing to "their beautiful plumage, but a bit lazy in their habits. "I never heard their song, (if they have any), only "their soft call note. I fed them on Thrushes' food, "boiled currants, and plenty of mealworms."—Ed].

About some of my Birds.

By Mrs. E. Warren Vernon.

At present I am not the happy possessor of an out-door aviary but I hope to build one later.

I have some very large cages, made to my designs; one is 1½yds. long, 3ft. 6in. wide, and 2ft. 6in. high. In it I keep Combassous, Avadavats, a Diamond Sparrow, and Waxbills. They live always in an open bow window, and seem to thrive. They are all very tame, and come out in the morning for a fly, returning to their cage themselves. The way they bathe is very amusing. The Diamond Sparrow always starts, while three Waxbills sit on the edge of the bath and enjoy the spray. The moment he has finished they all three tumble in and have their turn. It is quite "mixed bathing," and when over, the drenched little objects sit about on the sand very like human beings to get dry enough before "doing themselves up."

The Diamond Sparrow has fallen in love with the Avadavat and follows him about, letting him take his mealworms away, and singing his ridiculous song to him.

The Combassous are most unhappily married. He pecks her and drives her from him whenever they meet. She sits as far from him as possible. Very likely when he comes into colour, he may be more amiable, but at present he is simply horrid to her. She spends a great deal of time asleep trying to forget, poor little thing.

In another cage, nearly as big, I have four pairs as follows:—Siskins, Zebra Finches, Tri-colored Nuns and Saffrons. I have a wire frame put into the window and let them out for a fly. Then I let out a very tame hand reared Goldfinch, and to see him making love to all the ladies, especially the Saffrons, is ridiculous. He follows first one, then another, calling to them and swishing his tail, and trying to look fascinating, until his wife, a Canary, appears on the scene. Then he tries to look innocent, and, if the cock Zebra is anywhere near, goes for him at once. He has a great hatred for the Siskin and fights him through the cage bars for hours if left to do as he likes, but the Siskin takes no notice of him.

I have a pair of Ribbon Finches in a breeding cage, which are also very tame. All my birds are healthy, and though there is an occasional death, it is more often the result of an accident than of sickness, though I sometimes lose some when fresh bought from the dealers.

I am having a large flight cage made to fit into the window so that the birds can fly out of their cage into the air when they like, and I hope soon to keep many other species.

Ornithology and Politics.

By Edinburgensis.

It would seem almost a travesty upon our vaunted civilization to find in any large section of a community that special efforts had to be employed to obtain a surcease of customs which are actually savage and in every sense brutal. But such instances are not unknown. Just at present ornithologists in Los Angeles County, California, and several of the adjacent townlands, are much troubled over the opposition actively urged against a proposed modification of the Game-Laws which seeks to make it "an offence to shoot nesting doves." "To shoot nesting doves" sounds gruesome enough in all truth, and would *ipso facto* seem to be its own condemnation.

The Mourning Dove (*Zenaidura macroura*), an interesting and fairly numerous species, is the bird most concerned. This Dove, especially in Southern California, is not migratory at all, and hence maintains a somewhat irregular breeding season—extending oftentimes as late into the year as October—August and July probably having the maximum number of nests. The Game Laws in the above-mentioned region permit dove shooting from July 1st. The result is that thousands of parent birds are shot, leaving the unfortunate nestlings to die of starvation. Week-end "sportsmen" must needs have some recreation during their vacation, and furthermore several "trusts" of gun and ammunition dealers must have customers, so the inhumane practice is continued. The matter has now become a political issue, so that office holders or office seekers actually hesitate to vote for a protection for these beautiful and valuable birds, if in so doing they will in any wise hazard losing the "vote" which is so "essential" to perpetuate the holding of office.

The Dove ordinance of Lower California is at present a hot campaign-issue, and it is a novel phase of ornithology to find the welfare of a species depending entirely upon political favours. So keen is the trade of politics with all its debasing concomitants in this sun-lit land of fruit and flowers, that every instinct of humanity is placed its unwilling slave. Twenty-eight States in America protect the Dove. Ninety-eight per cent. of the citizens of

Southern California condemn the cruelty of this debasing sport of shooting nesting Doves. But it can be made "law," and maintained "law" by the professional politician just as long as "there is something in it." "What is there in it?" is the full and only horizon—for brute or human—which is scanned by the degenerate one of the primates. Trespass upon or about his presumed perquisites, and he immediately blocks the measure, be it ever so humane or even necessary. Surely it is said truthfully that unless above himself a man cannot raise himself. How poor a thing is man! That he is a poor thing is proclaimed from the very house-tops, when the claims of parenthood—a period of admitted sacredness even amidst the lesser forms of the field—find in his heart no generous response.

The Dove has ever associated with itself special claims for human recognition, and it is to be hoped that it may ere long be granted that consideration, and become protected and preserved amidst regions to which it adds grace and attractiveness.

Note on the Great Crested Grebe.

By J. E. R. McDonagh, M.R.C.S., F.Z.S.

Seeing the editorial reference in a recent issue to the Great Crested Grebe occurring in Surrey, I am taking the opportunity of giving a short account of some of these birds seen and studied for some years past in Wales by a friend of mine, Mr. Raikes, upon whose ground they are, and who has been good enough to send me the following details. It all goes to show what great things the Wild Bird Protection Act has achieved, aided as it is in many instances by private endeavours.

"April 3, 1904. Eight Great Crested Grebes seen here (Breconshire), date of arrival uncertain: have never seen them in the winter. Nest towards the end of May or beginning of June.

April 19, 1905. Could only find three pairs this year.

April 13, 1906. Eight pairs of Grebe—a large increase.

Apparently on first arrival they all keep very much together, and are very difficult to get at: in about a week or ten days they divide up into pairs and seem to become less shy. Have very rarely seen them fly, and then only when surprised at close quarters.

They rise quickly, fly straight, but never more than a foot or so from the water. Usually when about 100 yards or more away they begin to settle down in the water so that not much more than their necks are showing. Then they dive away very rapidly coming up every 20 to 30 yards.

The nest is merely a very loosely matted lump of rushes floating on the water and always saturated with water. Generally but not always have found the eggs covered up.

Have never seen the birds on the water in August. I understand that 30 or 40 years ago they were to be seen on this bit of water in dozens."

Intelligence in a Firefinch.

By E. Hopkinson, D.S.O., M.B.

The following little incident, showing how strongly the sense of locality is developed in small birds, will probably be of interest.

One day when travelling up country I found, when I arrived at a certain village, that the house prepared for me had a roof more useful for ventilation than for anything else. As rain appeared to be imminent, an old and rainproof one was sent for from the chief's yard. In due course this arrived and was put in place of the defective one. An hour or two later a hen Firefinch hopped out of a hole in the thatch and flew round the hut, and eventually back to her nest, only to come out again and make a thorough inspection of her new surroundings, which evidently puzzled her a good bit. After thoroughly examining the interior she flew out of the door, but was soon back again, evidently not liking to leave her eggs, (which I found she was sitting on), for long. Gradually however the absences grew longer, and during the early afternoon she disappeared, (as I thought for good), but about four or five o'clock, just as I was changing to go out shooting, I heard the familiar "chirp," and there she was, back again at the mouth of the nest. She had no sooner disappeared into this, when in flew a cock which, after a fly round the house, heard his mate's voice and followed her into the nest. Next morning they were both in and out all day, and quite settled down in their new surroundings. I can only hope their move back to town, when I left, was as successful.

The distance the roof was carried was about 300 yards. I suppose that the hen, when she found her mate did not come to her, flew back to the town, found him searching for his lost one, and managed to convey to him what had happened.

Dr. Russ on the rarer Firefinches.

Translated with notes from Die fremdländischen Stubenvögel

by Dr. E. Hopkinson, D.S.O., M.B.

(*Continued from page* 98.)

The last Firefinch which Dr. Russ describes (also in the Addenda) is particularly interesting to me, as among a lot of birds which I got this year in the upper part of the Gambia, was one of the same kind, that is a Firefinch exactly like the common bird, except that its plumage is a bright bronzy-orange instead of red. This was his colour the day he was caught, so that this abnormality cannot be due to the effects of captivity, as I thought might be the case when reading Dr. Russ' account of his specimens. Now after two months cage-life the orange has spread over nearly the whole plumage. Our author, (as will be seen in his account which I give below), considered his birds a distinct species, but personally I expect that, like mine, they were merely abnormally coloured specimens of *L. senegala*.

The BRONZE FIREFINCH (Russ, Die Fremdl. Stub. p. 668).

In the late autumn of 1873 among a large consignment of birds which I obtained from Charles Jamrach of London, I found a little Astrild, which I was unable to identify. It was so dirty and so poorly feathered that only the head and upper back were available for diagnostic purposes, but in size, shape and general behaviour it closely resembled the Common Firefinch, while it also had a similar call-note and the same habit of wagging its tail; its colour however was not crimson, but a reddish-orange or a golden bronzy-brown. I kept it most carefully in a cage with other rare birds, but one day it got out into the bird-room, where some of the larger Starlings lived, and here it was either killed by one of these or managed to escape for good. Again in September, 1875, the large dealer, Mieth of Berlin, received from Antwerp a big lot of small Africans in which a similar bronzed-coloured Firefinch chanced to be included, and in full plumage too, but so ill that it died in a few days. Mr. Mieth gave me the body and Herr Reichenow and I, though we went through the collection in the Berlin Museum and thoroughly searched the literature, could find nothing about such a bird, and so came to the conclusion that we had lighted on an undescribed species, to which Herr Reichenow has given my name (*Aegintha russi*), while I have christened it with the vernacular name which heads this section. Perhaps this pretty Firefinch (the only known specimen of which is now in the Berlin Museum), will later on be imported in larger numbers, but hitherto only the two specimens I mention appear to have been found among the many thousands of small Waxbills, etc., which come into the market every year during the latter part of the summer.

Herr Reichenow thus describes these birds :—Forehead, sides of head and whole under surface orange (yellowish-red) ; above dark brown tinged with orange ; rump, orange ; tail feathers black with broad outer margins to their basal portions ; under tail-coverts and vent brown with a faint orange wash ; bill orange-red with black culmen and a pale horn-coloured cutting-edge ; iris dark-brown ; feet pale horn-brown. Length 9.50m. The bird closely resembles the Spotted Firefinch (*L.*

rufopicta) in size and markings, but is clearly distinguished from this species by the orange colour which replaces the crimson of *rufopicta*.

The above description fits the bird I now have very exactly, except that portion regarding the similarity to *L. rufopicta*. My bird certainly is very unlike the latter, several of which are now in the same cage, so that comparison is easy; as I said above he is a Common Firefinch in everything but his colour. There are two details omitted in Reichenow's description, the colour of the eyelid-ring and the presence of white spots on the sides. In my bird there are a few of the latter, very minute, on the sides of the chest, and the lid-ring is pale yellow, like that of *L. senegala*, and quite different from the narrower and pale-grey lid of *rufopicta*; in the latter too the side-spots are large, distinct and almost linear.—(E. H.).

The Jacarini Finch.

(*Volatinia jacarini*)

By W. T. Page, F.Z.S., etc.

This handsome bird, after being off the market for some years, has recently come to hand in fair numbers, but males only. It is very similar in colour to the Combasou, but is a much more graceful bird, of fine contour and a longish tail, which is widest at the end.

The adult male is glossy blue black, with purplish reflections on the neck in some lights; the shoulders and wing-coverts are silky snow-white. The female is brown, Mr. R. A. Todd describing it as resembling the female Indigo Finch.*

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*The male when out of colour, (if one may use that term, for it has no seasonal change of plumage in the same sense that the Combasou has). is always glossy black, and always retains the white shoulder with a very variable quantity of greenish-buffish brown markings, principally on the breast, imparting to it quite a speckled appearance on the underparts.

Habitat, Central America and South America to Brazil, Peru, and Bolivia; specimens from the different localities are said to vary considerably in colour.

This bird appears to have been first imported in 1894, (I am open to correction); Mr. Fillmer who had one about that time found it at first peaceable, then later it took to chasing its fellow captives about; Mr. R. A. Todd who possessed a pair in 1895, found them eager for insects; the late Mr. Erskine Allon, who also had a pair or pairs, described the female as very similar to the hen Combasou, and his birds were eager for insects. Mr. Fillmer's bird on the contrary would eat nothing but seed.

In demeanour and also in shape my bird strongly resembles a Waxbill, in fact as to size and shape it comes very near to the Aurora Finch, a pair of which are occupants of the same aviary. It has a very sweet and fairly strong Waxbill-like trill, and like the Waxbills is scarcely ever still, the tail, except when the owner is asleep, being a very fair example of perpetual motion. When feeding, my bird does not permit any other to approach the seed dish, but otherwise it is quite peaceable, and when it has satisfied its appetite, the other birds are allowed to do the same without interference. I have much regretted being unable to get a female as the male is very fond of carrying a straw about, and I should say would readily breed in a suitable aviary. My bird is very eager after insects, *viz.* mealworms, earwigs, and spiders. His diet consists of canary, white, and spray millet, green food, and a little insectile mixture.* He helps himself freely to all the above and appears to thrive on the same; though rather sickly when he came into my possession he soon picked up, and has never ailed since, and is at the moment of writing in exhibition condition.

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*This mixture consists of "Game" meal, ants' cocoons, dried flies, and crushed biscuits, with sometimes a little boiled potato in equal parts, and made crumbly moist.

He has recently had a day's liberty in the garden, owing to a small flap being inadvertently left open, but he allowed himself to be recaptured, and if one may judge by his demeanour, he evidently prefers the plenty and safety of the aviary, (or perhaps captivity as the sentimentalists are apt to term it), to catering for himself at large. When he was once more in "durance vile" he had a good feed, trilled his little lay, and then had a sleep. I was not so fortunate with some of the other birds however, and among others had to mourn the loss of some well-seasoned Aurora Finches and Yellow Sparrows. Mr. R. A. Todd found his birds of a retiring disposition, keeping mostly among cover. This may be so when they are building or incubating, but I cannot think it can be general; my bird is of a very bold and confiding disposition and he will feed with anyone, (even a stranger), in close proximity. This fearless behaviour, coupled with his vivacity and sweet little song, constitutes his greatest charm.

He is a handsome and engaging little fellow and should be in all collections of small birds.

Editorial.

MEDIÆVAL ORNITHOLOGY:—In all times the physician—to use the term in its broad sense—has rightly regarded his art as a specially considered branch of Natural History, and we therefore feel no surprise on finding that such men as Aristotle, John Hunter, and Ambroise Paré, bestowed more or less attention on the science in its all round aspect. But every man has his own personality to contend with, and so while Aristotle was in the main only a great collector of specimens, and Hunter an indefatigable searcher after the physiological truths which underly ordinary visible phenomena, Paré was but a credulous purveyor of the then current inanities pertaining to fishes, beasts, and birds. And this is the more extraordinary, seeing that as a surgeon he was of more than ordinary celebrity and ability, and is very properly regarded as the father of French surgery.

In his voluminous folio, (originally published on Feb. 8th, 1579 as the result of fifty years professional work in his capacity of hospital surgeon, army doctor, and medical adviser to more than one King of France and their courts), we find accounts of various animals of the weirdest description, accompanied by plates, some of which make one's hair literally stand on end. The edition I am about to quote from is Johnson's 1649 translation "out of Latine," and this is what we read anent the Bird of Paradise.

"*Jerome Cardane* in his Books *De Subtilitate*, "writes that in the Island of the *Moluccas* you may "sometimes find lying upon the ground, or take up in "the waters, a dead Bird called a *Manucodiata*, that is "in Hebrew, the Bird of God, it is never seen alive. "It lives aloft in the air, it is like a Swallow in body "and beak, yet distinguished with diverse coloured "feathers: for those on the top of the head are of a "golden colour, those of the neck like to a Mallard, "but the tail and wings like Peacocks; it wants feet: "wherefore if it become weary with flying, or desire "sleep, it hangs up the body by twining the Feathers "about some bough of a tree. It passeth through the "air, wherein it must remain as long as it lives, with "great celerity, and lives by the air and dew onely. "The Cock hath a cavity deprest in the back, wherein "the Hen lays and sits upon her egs. I saw one at "*Paris* which was presented to King *Charles* the "Nineth."

We are naively told in a side note that "Whoso-"ever desires to know more of the truth of this bird, "let him read *Clusius* &c."

But let us not laugh at the worthy ancient who so minutely describes the habits of a bird which "is never seen alive." Are there not moderns who tell us that the reason why sitting gamebirds are not scented by dogs is because the odoriferous glands of the skin discharge their contents at that time *into the intestines!*

IS EGG-FOOD NEEDED?—Mr. Carr, the joint Hon. Sec. of the N. B. B. and M. Club writes to me, "I "may state I quite agree with you *re* yolk of egg. I "have kept small insectivorous British Birds for the "past seventeen years, and for the last five years I "have not used any egg, and I can safely say my birds "have done far better and moulted out just as well "without it, and I have not lost one through being too "fat."

Here we have real experience—the experience which is derived from a lengthy trial of *both* systems, and with which the "experience" of only one method cannot well be compared,—although it has been said to be "good enough for most men."

THE GREAT CRESTED GREBE:—*Apropos* of Dr. McDonagh's interesting note on this bird I may mention that when halting on my way northwards during my recent motor tour at a roadside inn on the Chester Road as it passes through Staffordshire, I saw in a wall case two splendid specimens of this bird which had been shot at Middleton Hall in that county about half a dozen years ago.

I also remember some of these birds breeding about forty odd years ago on a small lake on the immediate outskirts of Clun, a small market town on the Welsh border of Shropshire, where they went by the name of Loons. This latter fact would seem to indicate that they were fairly well known to the rustics of the neighbourhood, but I cannot now remember how many seasons I noticed them, nor yet how many there were, and since of late years I have lost touch with the neighbourhood I am not able to state whether they frequent that water still.

Country Life for June 2 of this year contained an article illustrated with some charming photographs of these birds and their nests, which had been taken by the exercise of marvellous patience and ingenuity by, I think, a lady, but not having the paper by me I am not quite sure as to particulars.

AVIAN PATHOLOGY:—Mr. Gray's letter on another page calls for some notice. First of all I can recommend him and others three excellent publications treating of special subjects, which, although I think all of them may be out of print, can be occasionally obtained by one's bookseller through the Trade journal. They are Klein's *Grouse Disease* (Macmillan), Clarke's *Bird Plague* (Fur and Feather Office), and Theobald's *Parasitic Diseases of Poultry* (Gurney and Jackson).

With regard to the probability of any early appearance of a more or less all round and reliable Text book on bird medicine—that I am afraid will have to be waited for till pathologists generally have made up their minds to study avian diseases, *not merely as a branch of mammalian pathology, but rather only by the light of the latter.* For instance if we wait till we find pus in a bird before we diagnose Septicæmia, just because Septicæmia in man is normally associated with pus, we shall have to wait a long time. Pus is rarely, very rarely present in birds, while Septicæmia is very common. Again, who in his wildest dreams would expect to find in a man, that, as the result of an old pneumonia, fully three fourths of his lung was of of a stony hardness, cutting just like a piece of gristle or a "hard" cancer? Yet I have found such extensive fibroses of lung and liver (microscopically verified) in Parrots and even in such birds as Bullfinches. More than this, these birds had appeared to be in perfect health and spirits right up to within a very few hours before their death from another immediate cause altogether. Mr. Gray hits the nail squarely on the head when he speaks of the necessity for special work on the part of those who would fain be regarded as authorities on avian disease. And not only does this apply broadly to the mere pretenders to medical knowledge, but even in a narrower sense to those who actually belong to the two medical professions. Birds have in a large measure their own pathology. This must be studied as such, and alongside the life history not only of the diseases involved, but also of the captive bird itself. There is a lifetime work for many men.

OUR COLOURED PLATE:—My readers will have noticed that in its uncoloured form our plate of this month has already appeared in *Cage Birds* of Sept. 1st under the title of "An Extra Special Waxwing," this having reference to the tail tips, (depicted at my desire as occasionally appearing in old birds).

The Editor has assured me personally of his great regret, and has in his issue of Sept. 7th reiterated the same in the following terms. "It appears that the "drawing of a Waxwing published by us last week, "was executed by Mr. Keulemans to the order of Dr. "Creswell, as Editor of *Bird Notes*, the organ of the "Foreign Bird Club. By some mistake it was in-"cluded with a series of drawings of British birds "purchased by us from Mr. Keulemans, and we must "express regret under the circumstances for having "unwittingly reproduced the picture without proper "authority from the rightful owner."

He has also been generous enough to offer a donation of two guineas to our Illustration fund, which I have accepted on behalf of the Club.

From a letter received from Mr. Keulemans I learn that he sent the Editor of *Cage Birds* a copy of the proof of the Waxwing for purposes of comparison with a plate of the same bird which had just appeared in that paper. He goes on to say:—" What I believe " to be the case is that the Publisher or Editor had " mixed up some of my plates he had bought of me " some months ago, and that the Waxwing proof was " supposed to belong to the same lot."

Anyhow—" All's well that ends well," and not to be outdone in courtesy I hasten to thank Mr. Carl for his generosity. W. GEO. CRESWELL.

Review.

Our School Out-of-Doors. By the Hon. M. Cordelia Leigh, author of "The Witness of Creation," etc. Cr. 8vo., cloth 2/-. 2nd. Impression. T. Fisher Unwin.

The fact that this little work, originally published in January, demanded a second impression in June, conclusively shews that its claims to be regarded as a means of popularising natural history science have been recognised by a considerable section of elementary teachers and by others of the general public.

At the same time we feel that from a scientific point of view a second edition would have been better than merely a second impression. There is much that could with advantage have been amplified and explained, and the more so because the class of readers appealed to is one that is presumably not too well-grounded in the laws which underly natural phenomena. Still we are bound to say that the authoress shews considerable personal knowledge of field Natural History and in addition has apparently been an extensive reader of the literature of the subject.

It is needless to say that she constantly inculcates upon her youthful readers those lessons as to their behaviour to the lower animals, which are dictated alike by common sense and humanity.

Post Mortem Reports.

(*Vide Rules*).

BLACK-HEADED MANNIKIN. (Mrs. Vernon). This little bird owed its death to injuries inflicted by the Budgerigars. It is never safe to keep these birds with small ones.

ZEBRA FINCH. (The Hon. Mrs. Somerset Ward). Enteritis, i.e., intestinal catarrh, was the cause of death.

CREST-BRED CANARY. (Mrs. McAdam). Fatty degeneration of the liver, the result of chronic congestion due to a previous too liberal feeding. The bird was intensely emaciated.

BUDGERIGAR. (Mr. Chaplin). There can be no doubt that death was remotely due to over eating, since the bird was inordinately fat, and the immediate cause was apoplexy.

BUDGERIGAR. (Miss Brooksbank). The condition was exactly the same as in Mr. Chaplin's bird.

RIBBON FINCH. (Mr. Howe). Unfortunately I could not determine the cause of death in this case: the bird had possibly received some shock.

W. GEO. CRESWELL.

Correspondence.

WANTED—A BOOK ON BIRD DISEASES.

SIR,—Could you or any of your readers recommend me a practical work giving accurate information on the general management of birds, and the prevention and cure of their diseases?

Beyond a stray paper or article on the investigation of some microbal disease and its means of prevention or cure from the pen of some eminent Russian, German, French, Italian, or other European scientist I know of no reliable work dealing specially with the above subject. And although I have a great number of works on birds in my library I have failed to derive much trustworthy information from any of them that is likely to be of real utility to the practical aviculturist or scientist. It seems that nearly every author who has dabbled in the question has written from his imagination rather than from a comprehensive study of the actual facts and has, in consequence, drawn inexact or incorrect conclusions. And at this there is no wonder when one just calls to mind that very few of the writers have received any training at all in anatomical and physiological science, let alone the elements even of pathology, bacteriology, or therapeutics. In reality, a student of avian pathology and hygiene requires as much preparation for the study of the diseases of birds and their prevention as the practitioner of human or veterinary medicine. But what do we actually find? Most, if not all, of the amateur bird physicians, who are no doubt honest in their endeavours, are absolutely ignorant of the laws that govern health or disease and the means of their respective preservation and prevention.

Many of these so-called authorities are to be pitied, because they are ignorant of their own ignorance, even if they feel highly flattered at the admiration of their still more ignorant admirers. Furthermore, it would appear as if bird fanciers were led to mistake the euphonious symbolic Greek and Latin terms, practically the sole stock in trade of many writers on avian matters, for "science," whereas this term really means exact knowledge or truth, and not by any means guess-work or imagination.

I feel constrained to write as I have above, since being a professional man myself, who has given a life time to the study of the diseases of animals and a great deal of attention to the management of birds, and the prevention and cure of their diseases, it is only my duty to assist in furthering truth by correcting errors, exploding mysteries, and exposing humbug.

I ought not to forget to mention that I have read your little work on "The Hygiene of Bird-Keeping" and consider it to be the most truthful exposé of the subject extant. The only fault I have to find with it is that it does not go far enough. I feel certain a more copious work on this matter from your logical pen would be welcomed not only by the laity but also by those professional men who have a taste for aviculture as well as for comparative pathology and hygiene. There is room for a good work on a subject by no means neglected by those eminent leaders of science such as Pasteur, Koch, Metchnikoff, etc. I believe so far as the birds of utility go, Sir John McFadyean, Royal Veterinary College, goes deeply into the question of their diseases with a view to their prevention.

HENRY GRAY, M.R.C.V.S.

117, *Earl's Court Road, S.W.*
Aug. 1st, 1906.

THE DIFFERENCE IN BIRDS' CHARACTERS.

SIR,—I do not know if any of our members have kept many of the same species of bird at the same time and noticed the very marked characteristics in them. Lately I have had six young Bullfinches, four of them being cocks, and in taming them I found them to be very like human beings. Each one has a temperament of its own, and each has to be treated differently. Three of the cock birds got tame and fed from my hand in a few days, but one would not, and now after two or three weeks patience on my part he is just as far off being nice and amiable as he was the first day. It is the same in taking their baths; they have them in a large wire cage put by the front of the door, and come out and bathe directly they see it. One, like a timid bather, tries first one foot and then the other, stands in the water and hops out again twenty times before finally having a dip; another falls in at once and splashes wildly; a third makes a very long and careful dressing of his feathers, oils them, and preens them, and then steps in and has a systematic good old Saturday wash, all thus being different. I think it is all this that makes bird-keeping so interesting.

Goldfinches also are full of curious ways—as to their tempers especially. I have one, who, if given even a sunflower seed he loves so well, rather than lose the opportunity of pecking my hand, will drop the seed twenty times. He is as spiteful as a monkey and will pursue all other birds he happens to dislike round and round the room, though, curious to relate, he loves foreign birds and sings to them, and flirts before the bars for all he is worth. I have put another Goldfinch with him, and after a battle or two he seemed to find out that two can play the same game, and now he is very peaceful, but the least little thing that upsets him makes him at once turn on the other inmate and vent his anger on his unoffending head.

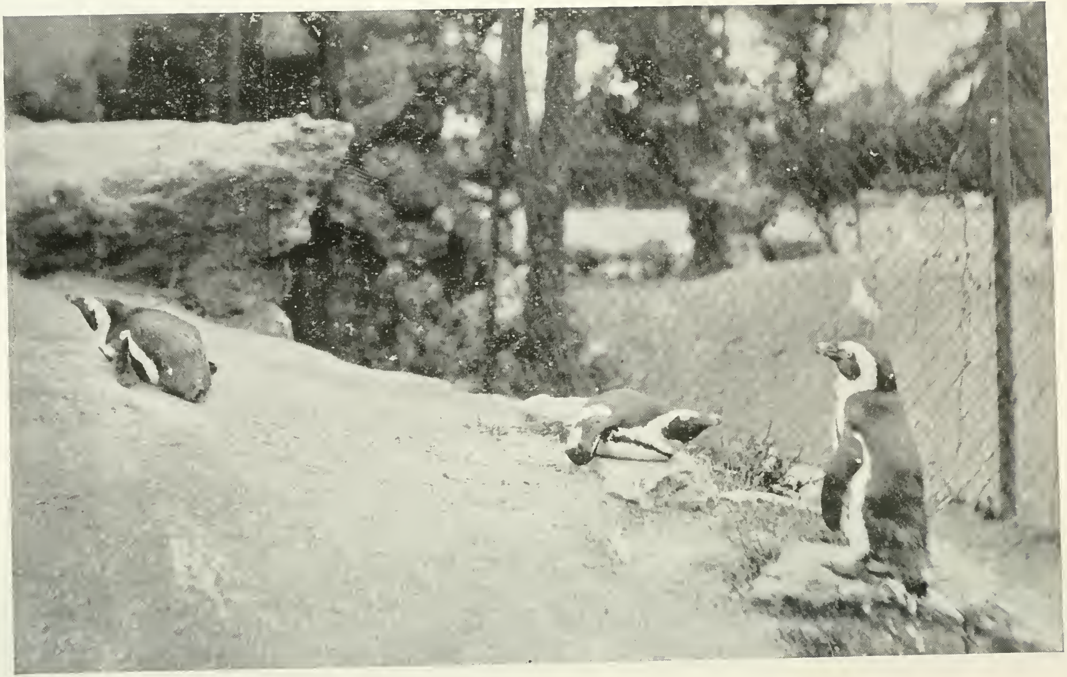
E. WARREN VERNON.

A SMALL PARRAKEET AVIARY.

SIR,—I have in my old fashioned kitchen garden a small aviary. It was originally intended for an apiary, but I substituted a V for the P and birds for bees, putting in one pair of Cockateels, one pair of Blue-winged Parrakeets, and two or three pairs of Budgerigars. The flight is backed by a South wall and is only 12 feet by 3 feet; beyond this, boxed off, there is a small nesting room of the same width and 4 feet long. There is no artificial heat whatever, but through this compartment the birds can go if they wish to a more sheltered place. Being however rather dark they do not go unless they are made to do so in very cold weather.

The Budgerigars and Love-birds have bred, the former frequently, but the Cockateels have never succeeded till this year, though they have had as many as fifteen eggs. I attribute the success this year to my having given them a small barrel instead of a flat box to lay in, as this enabled them to keep the eggs together. I have now three fine young birds (a fourth having unfortunately fallen out of the nest when young), and these are advertised in the "Bird Market." While they were breeding I continued to feed the parent birds just the same as before, namely, on canary and millet, oats, and fresh green food, and they seemed to require nothing further. It was interesting to notice how the parents took it in turns to stay with the young ones and keep them warm.

M. L. HULTON.



PENGUINS AT THE ZOO.

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[OCTOBER, 1906.

BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

Some Reminiscences of my Early Days of Foreign Bird Keeping.

By J. A. SWAN.

(*Continued from page* 71).

Another very daintily coloured little bird is the Silverbill, with its tints ranging from pearl, through buff, to brown. I have only had two or three of the species, as I found them somewhat uninteresting after a time; but nevertheless their quiet gentle manner and confiding disposition make them by no means the least desirable specimens in a mixed collection. My birds were all of the African species, and one of them sang rather prettily in an undemonstrative sort of way. They were easy to cater for, seeming to desire nothing beyond the usual seeds, though at times grass in the ear would be eaten with great relish. Bathing they were naturally fond of—by-the-way I do not know whether any of our members have noticed it, but from my observations it appears to me that birds hailing from a tropical climate bathe more frequently than those whose original habitat was in more temperate zones. Whether this is the continuance of their natural or wild life, or mere fancy on my part, I am not prepared to assert dogmatically; perhaps, however, some of our readers would let us know whether their observations bear out this theory or otherwise.

The Spice Bird or Nutmeg Finch is yet another quietly dispositioned bird, and therefore as equally desirable as the Silverbill. Its appearance will at once attract the attention of strangers on account of the quaint black and white bars which run horizontally across the chest, reminding one somewhat of a Plymouth Rock in miniature—at least this was the impression I received on first seeing one of the species. There is very little in the habits of the bird in captivity to lead one to enthuse over: but on the other hand I can cordially affirm that I know nothing whatever against it, which is a good deal more than can be said of some species. It is moreover a simple liver, and will be quite content with the fare provided for the Silverbills, which is another "feather in its cap" from an avicultural point of view, and reflects everlasting credit on its progenitors.

It will have doubtless been noticed that all the species mentioned in this series of articles are comparatively common and nearly always freely imported. They are, *ipso facto*, all birds of moderate price, and yet the range they provide the budding aviculturist with is sufficient to ground him in the knowledge most useful to him when he essays the task of keeping the rarer and, generally considered, more delicate species, to which nearly all amateurs drift sooner or later.

Another strong point in favour of the birds I have enumerated lies in the fact that they present the least possible amount of trouble and anxiety to the young foreign bird-keeper in the matter of suitable food and attention. Given plenty of varied seeds and clean water for drinking and bathing, with occasional dainties in the way of green food, they will do very well and will soon repay their owner for his care by their sleek and contented appearance. It is one of my pet theories that all birds are at least semi-insectivorous, therefore all my so-called "seed-eaters" used to receive insectile food in addition to the ordinary seeds; and while it is not absolutely necessary or even essential that the insectile food should be given, I always strongly recommend it. To the young bird-keeper however the mention of such food often seems an insurmountable obstacle in the pursuit of his hobby, and conjures up visions of mixing all sorts of extraordinary ingredients, of any knowledge of which he is absolutely devoid. So if it is decided to give insectile food it is easier in one's initiatory stages to purchase a good one from among the many advertised, for though it is somewhat more costly than making one's own, it saves so much time and worry that it is more than worth the additional expense. After a time when confidence has taken the place of timidity and knowledge of ignorance, the bought food can be dispensed with and a home made one substituted.

I have not mentioned the care necessary to ensure as cleanly a condition of the cage or aviary as possible, because I think most young aviculturists give this important matter a due meed of attention. In fact they are often apt to somewhat overdo this part of the business—the poor birds no sooner settle down from one terrific "spring clean" and attack on red mite (the bogey of all bird-keepers) than they are scared out of the few remaining wits left them by another energetic onslaught on the part of their too anxious owner. Very few birds, given opportunities for bathing regularly, fail to keep themselves clean and free from troublesome pests, so the remedy is a very simple one. Do not let it be thought, however, that I am advocating the bath to the exclusion of other necessary measures. If the birds are kept in a large flight cage indoors, cover the floor with sand for nearly an inch, rake it over thoroughly every day and change it twice a week. If in an outdoor aviary less trouble is necessary, inasmuch as changing the sand once a week is sufficient, raking it well over on the third or fourth day. Do not throw the old sand away; it is not only expensive to keep buying new sand but also unnecessary. Get a very fine mesh wire sifter and thoroughly pass all the sand through it, going over it a second time if desirable, and throw the refuse away. Then spread the sand out as thinly as possible—on large sheets of paper will do—and let it dry in the sun and wind for at least a day before putting it back into the aviary. And when one has sprinkled over the whole a few handfuls of prepared grit that one buys in bags, heigh presto! our sand is as good as ever, minus a slight waste each time.

Cuttle fish shells, which are advantageous for the birds to pick at, can be purchased at any bird shop, though I very rarely bought any. There are generally plenty to be found on our sea shores washed up by the tide, and it adds a zest to an early morning's walk to hunt for a few when on one's holidays at the seaside. I used to come back with fifty or sixty large pieces, which were more than sufficient to last me until my next visit.

Keep the perches as clean as possible and use dead boughs with the bark on in preference to straight sticks. The former are, of course, more natural for the birds' feet, and if you are fortunate enough to live in the country you need not bother about cleaning them when dirty; throw them away and go and get some fresh ones. The thoughtful person though would probably reverse the order of these two operations.

It is quite unnecessary, and indeed undesirable, for the beginner in foreign bird keeping to pay more than a very moderate price for his birds, however deep his pocket may be. (What constitutes a moderate price at any given time can only be ascertained by glancing through the dealers' lists, or their advertisements which appear in all the birdy papers and magazines). The more common the bird, the better for the purpose of our amateur. It is obvious that in spite of all one's good intentions there is a greater possibility of losses occurring through lack of experience at that time than at a later stage; and the financial loss will be small if low-priced birds are bought.

But this is only a superficial reason. I will go deeper and say that the cheaper the bird the better chance it has, provisionally, of coming successfully through the initiatory stages of its owner. And the reason is not far to seek.

Like the majority of people the importers of foreign birds give far more care and attention to the merchandise which will realise the highest price, and consequently expensive birds are looked after much better than those whose market value is only a few pence. So it becomes a question of the survival of the fittest. The highly priced bird has to endure very few of fortune's hard knocks, whereas his lowly brother is bundled over with hundreds of others in the same cage and only the strongest survive. If, therefore, the young bird-buyer will pick out the birds which are in the best health and spirits from amongst the motley selection offered him—generally termed small stuff by the bird-selling fraternity—he will find that his purchases, having been hardy enough to survive their many vicissitudes will possess sufficient hardiness to enable them to make a strong and often successful fight against any errors he may inadvertently make from time to time. The expensive specimen having received a good deal of attention during his importation is not used to "roughing it," and in a parallel case would probably show his disinclination to be experimented on by quietly lying on his back on the floor of the cage or aviary, a mute reproach to its whilom owner.

Never mind if a bird is minus a tail, and possibly some breast and crown feathers; if the carriage is alert and jaunty and the eyes are bright and open, you are generally safe in selecting it. A bird can hardly travel some thousands of miles and remain cooped up as he has been and retain an irreproachable appearance, though some manage to do so. The feathers will grow again very quickly, and, a word in your ear, the dealer will probably accept a somewhat lower price for "that bald one"!

* * * * *

I was often impressed during my term of the Secretaryship of the F.B.C. by the frequent applications I received from members asking for advice on the very A.B.C. of foreign bird keeping. And it has grown on me that the writers of articles in our magazine often presume a full knowledge of rudiments on

THE GULL AVIARY AT THE ZOO.

[To face page 175.

the part of their readers. I may have erred myself—whereas I am afraid that through the omission of references to these a good deal has been just so much Greek to many. It has been this consideration therefore which has induced me to mention many matters well known to the experienced aviculturist, but which, I hope and believe, may prove of use and interest to the bird-keeper in embryo.

Wanderings in the Zoo.

By J. E. R. McDonagh, M.R.C.S., F.Z.S.

I ought really this month to have continued, or rather finished my notes on the birds in the Parrot house, but seeing that I have some photographs which the Editor has asked me for, I think it would be more fitting to say a few words about the Penguins and the inmates of the Gull aviary.

I would first mention that a notable event has occurred in the Seal pond, in that a pair of Penguins (*Spheniscus demersus*) from Africa has succeeded in breeding this year. Two eggs were laid on a ledge of the rocks and fortunately both hatched out on July 3rd, and at the time of writing (Aug. 22nd) both the young are flourishing.

I believe I am right in saying that this is the first instance recorded of these birds breeding in Great Britain.

The young were at first hidden very carefully from sight, and the parents were extremely savage at the time, even to the keeper. The young are now fully seven weeks old and have not yet taken to the water, never doing so until they are fully fledged, and these still have a good deal of down on them, though the back, the region round the eyes, and the breast, are quite free of it. I believe it is round the eyes where the feathers first commence to shew.

The eggs were coloured like those of an ordinary domestic fowl.

The mother seems in a very bad way at present: she looks ill, is extremely thin, and has quite forsaken her young ones, which are now being looked after only by the father, who feeds them after he has had his own meal, which generally consists of three to five herrings swallowed whole in rapid succession.

The two young birds wandered from their nest some days ago and had to be brought back; they are not only very strong but extremely vicious, so that the keeper can never go very near them.

[The hen appears to have recovered, for she has completely severed her connection with her family, and has become attached to another male member of the group in the pond.—Ed.].

Another interesting breeding event has taken place lately in the Gull aviary, a cross between two species of the Porphyrio or Purple Moorhen, the Indian P. (*P. poliocephalus*) and the Madagascar P. (*P. madagascariensis*). The keeper had to rear the young one, as the parents would have nothing to do with it. The Porphyrio forms a most interesting genus. The name is derived from a Greek word, *πορφυρα* = purple. It is mentioned by classical writers, and it is the *P. caeruleus*, one of the larger species, which is referred to by the ancients.

The most interesting form is of course the

Notornis from New Zealand, first described from an imperfect fossil skull by Sir Richard Owen. After he had described it a specimen was taken alive, the skin of which can now be seen in the Natural History Museum.

The Gulls have also bred extremely well this year, including the Greater Black-backed Gull, the young of which do not adopt the full adult plumage until they are about four or five years old. The Great Black-backed is the largest of the Gulls which breed in the British Isles. It is a very rapacious bird and a terrible enemy to any wounded animal it comes across. It is distinguished from the Lesser Black-backed Gull by not only its size, but by its legs being pink whilst those of the latter are yellow.

A bigger gull sometimes to be seen in this aviary is the Glaucous Gull, or, as he is often called, the "Burgomaster." This is still more rapacious than the former, and is very fond of robbing other gulls of their prey. He is only a visitor, coming to us in the winter.

Another arctic gull which also visits us is the Ivory Gull, sometimes seen in the Gardens. This bird is white, while its legs and feet are jet black.

Other gulls in this aviary are the following. Jameson's Gulls, which breed very freely every year, and this year young are now to be seen just behind an awning which has been put up for the gulls' privacy during the nesting time, although they never seem to mind publicity in the least; Brown-headed or Laughing Gulls, the gull which all Londoners must be familiar with by now, as they have come up the river every winter since 1895; but since his winter plumage is very different from his summer one many people do not appear to recognise that what seems to be two birds is really only one. In summer the head is brown, the back blue-grey, wings white and black, tail white, bills, legs and feet a brilliant red. In winter the hood is gone or reduced to a dark eye-spot, and the legs and bill are less bright. Then again there is the Common Gull,—somewhat badly named by the way, as all gulls are common somewhere or other. These breed readily in the British Isles, and are often seen far inland picking up worms etc. Their plumage in summer is pure white, except for the wings, which are tipped with black, and the back is blue-grey. The Herring Gull,—another gull which also breeds readily in the Gardens, is easily recognised by the yellow and red bill. Other gulls to be seen are the Indian Brown-headed Gull, the Yellow-legged Herring Gull, Scoresby's Gull, and Hemprich's Gull, to the latter of which a reference has already been made on page 103.

In this aviary there is a Gannet, some Egyptian Kites which nested in the trees, when they were very fierce, necessitating two keepers always going in at a time, one to keep off the birds, while the other was cleaning the aviary out and feeding the other birds. On one or two occasions a keeper was attacked. Other birds to be seen here are Night Herons, of which there are several species, (one, the *Nycticorax griseus* demanding special notice as it not unfrequently visits England, and would undoubtedly breed if left undisturbed), the Common Heron, and the Great American Heron. With them are also two species of Choughs, the larger one with red legs, feet, and bill being the Cornish Chough, and the smaller with yellow legs, feet, and bill being the Alpine Chough.

Other birds I ought to mention are Cormorants, Indian Crows, and Skuas.

(To be continued.)

The Crimson-winged Finch.

Pytelia phœnicoptera.

By Wesley T. Page, F.Z.S.

This beautiful and somewhat uncommon though well known bird is more generally spoken of as the Aurora Finch. It is a native of Africa, and has quite an extensive range over Senegambia, the Upper Nile region, and Equatorial Africa.

Plumage: The general body-colour is bluish-grey, paler and whiter on the under parts, and washed with vinous brown on the upper parts; lower back and upper tail coverts, rich crimson; lesser wing coverts, red; median and greater coverts, brownish-grey edged with red: flights, brown, partially edged with dull red: central tail feathers, rich crimson, with the outer ones blackish edged with crimson.* The whole of the under surface is regularly barred or scaled with greyish-white, (in some specimens the white is almost pure on the abdomen and vent). These barrings vary a good deal in individual specimens, as also does the amount of white on the lower surface; some bodies that have been sent to me for identification at various times, have been scaled almost as regularly and distinctly as a Spice

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* Most of the feathers of the upper surface have their tips edged with either dull red, or ruddy brown.

Finch, while in others the barrings are only to be discerned when the bird is still and fairly close to the observer, and the white of the abdomen and under tail coverts is replaced by a buffish-grey, scarcely lighter than the other portion of the lower surface; these variations have also been present in specimens that have inhabited my aviaries at various times. Beak, black; legs and feet, light brown; iris, red. Total length, 4¼ to 4⅜ inches.

Adult female: Slightly smaller in size, more ashen in colour, the red portions of the plumage are duller, and the barrings less distinctly defined; also her beak is narrower at the base than that of the male, but unless the birds are tame enough to permit of comparison in the hand, this is very difficult to determine; at the same time the difference is readily noted when comparing sexed skins. *P. phœnicoptera* is the type of the genus, which the late Dr. A. C. Stark gives as follows: "Bill slender, cone shaped and "lengthened; culmen swollen and slightly arched. "Nostrils hidden by nasal plumes. Wings rounded, "the distance between the tips of the primaries and "the tips of the secondaries less than the length of "the tarsus; the first quill very small. Tail short, "graduated. Tarsi scutellated anteriorly. Feet very "small. The genus Pytelia includes twelve species of "Weaver-finches. They frequent bushes and rarely "perch much on the ground, * have a somewhat "monotonous song, and are gentle and confiding in "their habits. † Those species whose nesting habits

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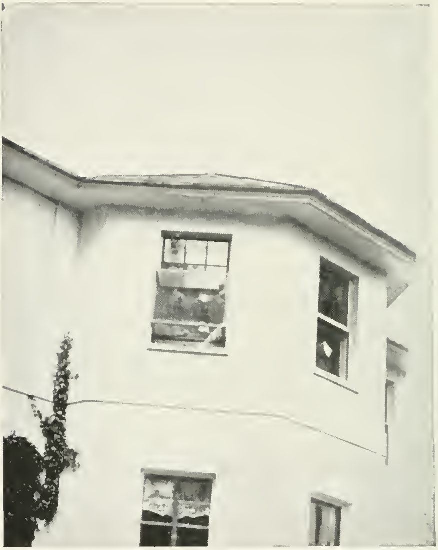
* They are strictly arboreal as inhabitants of the aviary, only stopping on the ground for feeding purposes.—W. T. P.

† This is also their demeanour in the aviary.—W. T. P.

“ have been observed build domed nests of dry grass “ in bushes, and lay three or four white eggs.” I procured a pair of these birds early this summer, (having only previously possessed two odd males) ; on arrival I found them in rather poor plumage, but apparently healthy. They were put into one of my indoor flights, and in about a month were in fine condition. They at once settled down to nesting and built in a Hartz-cage at the top of the flight, which was well screened with twiggy branches, and were sitting hard, when by an unfortunate oversight on my part through my being called away suddenly, I left a small flap open, and these birds and their companions, (six pairs of uncommon birds), at once found their liberty in the garden ; one pair and two odd birds were recaptured, but unfortunately the Auroras were not.

To my mind Dr. Russ did not exaggerate when he described the Aurora-Astrild as one of the most exquisite of the Ornamental Finches. To see it in the aviary, flitting about in the sunlight and making play to its mate, is certainly a sight to be remembered, and I do not wonder at his speaking of it as ravishing ; it certainly cannot be fitly described in a few tame words. As the male bird makes his play, the glancing light bedecks his chaste and lovely garment as with jewels. The love dance itself is both entertaining and interesting, as with excited curtseys he hops round the female with his tail spread, and erected almost perpendicularly. This continues for some little time, when the female begins to mince on her toes, the male's movements become similar, and they thus gradually come together as though drawn magnetically. While the love sport goes on, both birds utter a monotonous but not unpleasant "tsit, tsit." The male's short song is merely one or two single, and rather mellow flute like sounds.

Dr. Russ succeeded in breeding these charming birds; four eggs were laid and incubation lasted twelve days. Nestling plumage dull blackish blue-grey, barred on the under surface; shoulders, margins of wings, and tail, dull red; beak, horn grey; legs blackish. The change to adult plumage is a slow and gradual one. While Dr. C. S. Simpson considers this bird harmless but uninteresting, the late Erskine Allon (*Avic. Mag.*, Ser. 1, Vol. III., p. 125), eulogises it as follows: "This is my favourite bird and I always keep "four or five pairs at least. Confiding, good-natured, "and never ill when once acclimatised, I know no "species that nests so readily, so successfully, and "with such regularity. The pairs generally use cocoa-"nuts or nesting-boxes, placed side by side, and they "are absolutely fearless. I have known a hen con-"tinue sitting while the top of the nesting box was "being *scraped*." I cannot trace that Mr. Allon ever published any account of young birds actually reared, though the above implies this; most aviculturists get no farther than eggs. While perhaps not going quite so far as Mr. Allon they are certainly most handsome and entertaining birds, and should be in every collection of Waxbills and Finches. As regards diet, my birds had access to ripe fruit, my usual soft food mixture, sponge cake, canary, white and spray millet, and they took a little of each; were very eager for an occasional mealworm, and nearly went wild with delight over a blighty spray of rose foliage. They took a very thorough daily bath. They settle down fairly



MRS. VERNON'S WINDOW AVIARY.

To face page 1

quickly and soon recognise the one who supplies their needs, and if they do not often actually come and take an insect from the hand. they will soon take a mealworm six inches from your feet when cast on the ground. I may be a faddist, but finding they seldom or never picked at the cuttlefish, I always kept a supply of the same coarsely crushed; this sprinkled on the sand appeared to help them considerably in getting through the moult. They were about half way through this when they came into my possession. They are sun loving creatures, and only seek shelter for a brief space about midday.

I may say in conclusion that they were kept in my greenhouse bird room, in an enclosure 5 feet by 2¼ feet by 7½ feet high. I find these enclosures answer well, but I should say they have wooden ceilings six inches below the glass.

A Window Aviary and other Matters.

By Mrs. E. Warren Vernon.

In my last paper I mentioned that I had no outdoor aviary, and that I was about to institute a wire enclosure outside a window for my birds to use as a flight. I now have the first, and the second is an accomplished fact.

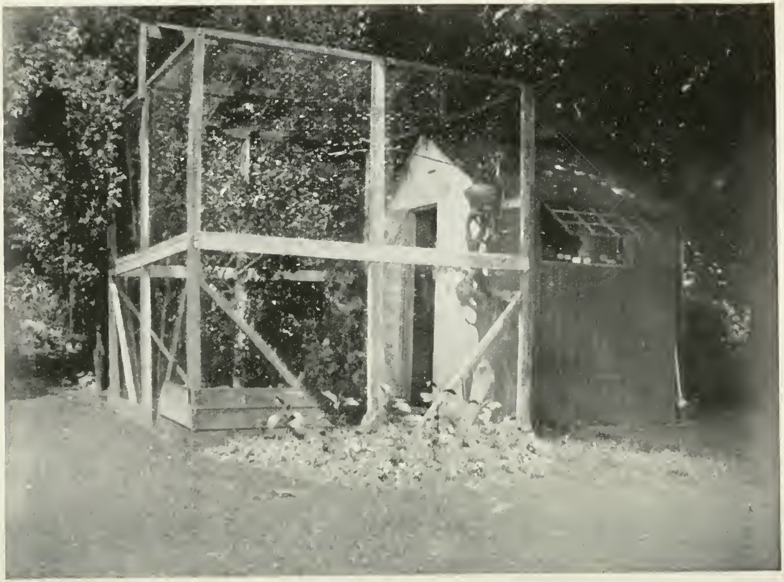
There are many people who live in towns and have no gardens, and consequently are debarred from the chance of a proper aviary out of doors. The accompanying photograph of the window aviary will show that the birds of those so circumstanced need not be absolutely deprived of fresh air. The aviary is of the simplest construction, and any carpenter or handy man can make one.

I find my birds simply revel in it. The eaves of the house shelter it from rain, and though I leave the door open for the inmates to return indoors to their cage, they now all sleep outside. Furnished with pots containing small box trees, geraniums, and heather, it is not unsightly from the outside, while viewed from within the room it is positively pretty.

The birds in it at present are Diamond Sparrows, Ribbon Finches, Combasous, Orange-cheek Waxbills, Avadavats, Cordon Bleus, and a solitary specimen each of the Green Singing Finch and the Firefinch. They are all in lovely plumage, which I attribute to their having had a few drops of Parrish's chemical food in their drinking water during the moult.

Now as to the out door aviary. This is also of simple construction. The sleeping compartment is made of framing covered with matchboards. The roof is similar, and is covered with asphaltic roofing felt, tarred, and then sanded. This material is exceedingly durable and at the same time economical as to cost: at the same time I cannot lay too great stress on the importance of a thick coating of tar and sand. This compartment measures 6ft. by 4ft., by 4ft. 6in. at the eaves, and 7ft. at the ridge. The entrance door is of match-boarding, fitted with a wire guard outside. The door from the sleeping house into the flight is of light framing covered with "Eureka" water proof paper, and in the outside wall there is a small window which can be either open or shut according to circumstances.

The flight portion measures 12ft. by 8ft., and is made of 3in. by 1in. framing covered with fine wire netting. Round the sides there is a narrow pavement



MRS. VERNON'S OUTDOOR AVIARY.

of tiles, leaving a square of earth in the centre in which are planted some shrubs. The indoors floor is entirely tiled and thickly covered with sand.

In this aviary there are Gouldians, various Nuns, Ribbon and Zebra Finches, Diamond Sparrows, Canaries, Combasous, and Whydahs.

In the near future I hope to erect a range of aviaries to contain three pairs only in each (of different species), for I feel sure that overcrowding is the principal cause of non-success in breeding. In the window aviary the Cordon Bleus built and laid three eggs, but did not sit. The Ribbon Finches also had two nests, but nothing came of them either.

Among other birds which I have brought up by hand this year are two Woodpigeons. While they were quite babies I let them out one day on the lawn, where I have several ordinary Ring Doves flying loose and breeding in a dove cot. A male young one of this year came down and perched near to the baby Woodpigeons, when the latter ran up to him crying to be fed. After a few moments this he actually did, feeding them from the crop like an old bird. They are now grown up and are quite tame, though having complete liberty along with the Doves, coming down with the latter every morning and evening to be fed. The young Dove still however feeds them between whiles, in spite of their being quite able to do without his attentions.

The Painted Bunting, or Nonpareil.

By W. T. Greene, M.A., M.D., F.Z.S.

This handsome and well known bird is often spoken of as a finch, but this is a mistake, for it possesses all the characteristics that distinguish the Bunting sub-family of the order Passeres, and not one of those peculiar to the finches, but I need not enter into these particulars here.

Herr August Wiener has well remarked that the Painted Bunting is a glorified presentment of the European Chaffinch, the disposition of colours and markings being much the same in both species, only infinitely more brilliant in the Nonpareil.

Some time ago I was presented with a pair of Painted Buntings which had, I was told, nested in confinement, but with no success, for the eggs were all barren.

When I received the birds I was not greatly surprised at their failure to perpetuate their species, for they had a faded washed-out appearance, that did not say much for their vigour, while their dull, listless manner confirmed the impression as to their want of condition.

The former owner of the Nonpareils had been accustomed to feed them on white millet, canary seed, and a little dried yolk of egg. I do not advocate making sudden and absolute changes in a bird's dietary, even when the latter is not quite correct, so I continued the food to which the Buntings were used, but in addition, I put into the cage a drawerful of ants' eggs, just to see if the birds would take some of them.

In a few days I noticed that the Nonpareils quite neglected the seed and dried yolk of egg to feed exclusively on the cocoons of the ants, and that they seemed improved both in manner and colour by the change. This was very encouraging, and I began to build castles in the air, and count my chickens before they were hatched.

The cock Bunting commenced to chase his mate rather more than seemed to be agreeable to her at times, for she used to retaliate and peck him savagely, which is their rough and ready way of conducting their courtship, and I naturally looked forward to a nest at no distant date, and supplied them with a nest-basket and a variety of material that I thought they might pick something from that would suit them, but, apparently they were not in a hurry, and during a period of several weeks no progress was made towards serious nidification.

We are told that hope deferred maketh the heart sick, and I began to get tired of my Nonpareils, their boisterous love-making, and their pretence at nest-building, and, as the season for my annual holiday had arrived, I made them over to a friend with whom they did not do any better, and I cannot now remember their subsequent history, except that the cock proved himself to be a very tyrant in the large general aviary in which he and his mate had been placed, and that he grew to be the most brilliantly coloured example of his species that my friend had ever seen.

Editorial.

THE COMPARATIVE VALUE OF FOOD-STUFFS :—A correspondent asks me for an article on this question. In order to be of any real value such an article would have to be of considerable length, and would have to embrace the consideration of various matters over and above the foods themselves. It would necessarily include a detailed account (1) of the alimentary anatomy as met with in the different sections of birds, (2) of the physiological functions of the different portions of the alimentary tract in these various birds, and (3) of the chemical processes occurring in each of these portions. Then would follow (4) the analyses of the various food stuffs, and (5) the comparative effects, not only of the various organs and their secretions upon these stuffs, but also (6) of the reciprocal effects upon the tissues of the body brought about by the products of these chemical changes.

Then again we should have to consider the conditions attaching to any one particular case out of the many which might present themselves. Is the bird in a cage? and if so is it alone in a small cage, or with companions in a large one? Or is it in an outdoor aviary, where it can take abundant exercise? Is it a young bird intended for exhibition, and therefore requiring to be fed up to a certain size or to a particular richness of colour without any regard to the permanent preservation of health, so long as it can win prizes for a year or two before dying of some pathological degeneration at a comparatively early age? or an old bird to be " kept up to concert pitch " as long as possible for the same purpose, and with the same inevitable result? Or on the other hand does its owner feel some personal rather than a merely selfish regard for it, and wish his little friend to live as long as possible and as free as possible from the aches and pains inseparable from progressive ill-health? And these are not all—other conditions under which a bird may be placed will present themselves to the reader, but enough has been said to give an idea of the scope embraced by the apparently simple request of my correspondent.

Formidable as it would be I have often contemplated such an article, but have as often abandoned the idea. Even if they read it, the great majority of laymen would get up from its perusal with a strange mixture of knowledge and misapprehension, due not to lack of intelligence but simply to the want of previous training in natural science. Then again, those members of the two medical professions who have kept themselves up to date in matters of comparative anatomy and physiology require nothing further on the subject beyond what they can find on special points in such classical works as those of Professors Smith of Philadelphia and von Wolff of Würtemburg and others.

However, for the benefit of my lay friends, who wish to give their seed-eaters the best chance of a reasonably long life under the altered conditions of captivity, I propose shortly giving a few hints as to their feeding, briefly touching upon the main principles which should underly their procedure.

TAMING A PARROT:—It will be remembered that one of my Senegals remained extremely vicious after many months of captivity. I then resolved to make a strenuous effort to tame him, and am glad to say that, up to the point of his shewing some affection to myself, I have succeeded. First of all I put him into solitary confinement in my waiting room and for several days kept him very hungry, so that he was glad to feed from my hand. At first I got many savage bites, but by degrees he seemed to recognize that I meant well by him, and at last allowed me to stroke his head and play with him while in the cage. I can now put my hand right in, and so long as he gets no fright from sudden movements, he actually responds to caresses. But he allows no liberties from others. Had I sufficient time to devote to him I feel sure that he would become as tame as the other. Dr. Hopkinson tells me that he has known some individuals that were quite untameable.

W. GEO. CRESWELL.

Post Mortem Reports.

(*Vide Rules*).

GOULDIAN FINCH hen. (Mr. Castle-Sloane). In breeding condition. Death was caused by rupture of an ovarian blood vessel, resulting in a large clot in that neighbourhood.

PINTAIL NONPAREIL. (Mr. F. Howe). Pneumonia was the cause of death in this freshly imported bird.

GOULDIAN FINCH hen. (Mrs. Mortimer). This bird died of pneumonia. There was also present a curious condition occasionally met with in cage birds, both alive and dead, consisting of a large area of the skin of the body being separated from the underlying tissues by a tense layer of air, looking like a blown out bladder. This is due to distension of one or more of the subcutaneous air sacks.

HORNBILL. (Mr. Castle-Sloane). Apparently well a few hours before death; fed on bananas, potatoes, biscuit, and rice: On dissection nothing was found except a catarrhal condition of the intestines (enteritis). It had been treated with a dose of castor oil and brandy, which under the circumstances was correct.

Correspondence.

A SOCIABLE SWAN.

SIR,—Perhaps the following facts taken from personal observation and experience may be interesting to some of the readers of *Bird Notes*, and lead to further instances of the intelligence and social instincts of these birds.

In the summer of last year two cygnets were given to us for the double purpose of adorning a small fresh-water lake in the grounds not far from the house, and in hopes of their keeping down a weed which had grown very thickly and threatened soon to cover the whole pond. The cygnets appeared happy and contented with their surroundings for some weeks, came regularly to be fed once a day, and were always together on the water, when one fine day one of them suddenly rose up and flew over the tops of the trees bordering the lake towards the sea about two miles off. It was reported to have been seen in the neighbourhood in different places for some weeks, but we never succeeded in re-capturing it, and the probability is that it joined the wild swans which are numerous in these parts. The remaining bird, deserted by its companion, was very sad and lonely, refused to remain on the water, and attached itself to the master of the house, following him about everywhere, coming up to the stable yard, and mounting the stone steps to the hall door and into the hall itself in search of him. Every morning it used to station itself under the study window, uttering a curious hoarse cry till the master appeared and either called to or went out to him. It was a strange and amusing sight to watch the big, ungainly creature struggling along the gravel walks, very rough and uncomfortable to the webbed feet one would think, in his endeavours to keep pace with human footsteps, following like a dog, happy and satisfied. When left to himself the bird seemed quite lost, and would wander about in a disconsolate manner as if missing his friend and companion, and was found at least once in the village, quite half a mile from the house.

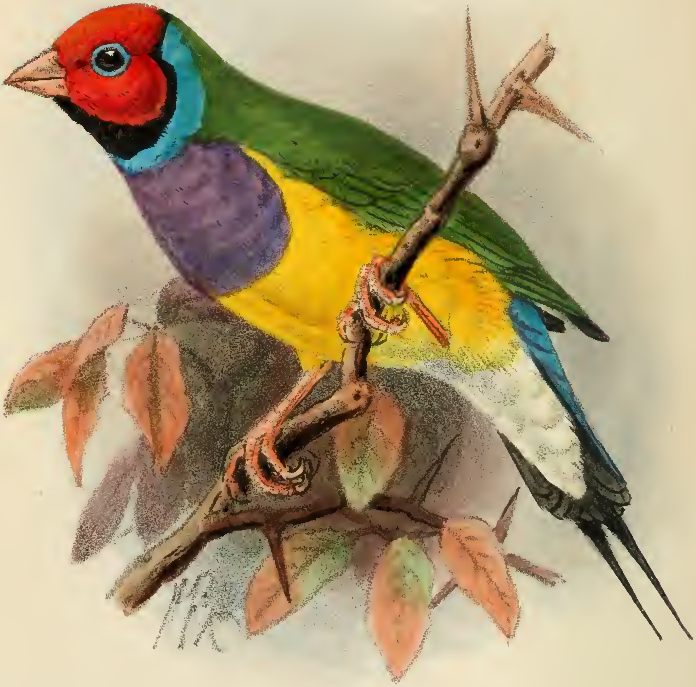
This went on for some months until an accident kept his owner within doors for weeks, and the cygnet finding himself neglected, wisely gave up his nomad habits and returned to the lake, where he and a new companion now live peaceably together and have quite succeeded in keeping down the objectionable weed. They are both beautiful birds with snow white plumage now, very tame and feed out of our hands, coming right from the farther end of the lake when called. We have had them pinioned, so now have no fear of losing them by flight.

N. M. E. WARD.

THE DANYSZ MOUSE VIRUS.

SIR,—In one of your previous Editorials I noticed you spoke very favourably of the Danysz rat and mouse virus in freeing your aviaries of mice. Shortly afterwards, owing to the fact that my stables, house, and aviaries were infested with mice, I determined to try the virus. After using it twice within a month I quickly cleared the place of these pests, so that I have not seen one for weeks. It is quite harmless, as I have fed my carnivorous birds on the carcases of the dead mice picked up, without in the least discomforting the birds. It is much better than "poison," as there is no risk of poisoning your neighbours' animals or your own. Again, it makes a much quicker job than poison.

HENRY GRAY, M.R.C.V.S.



G. Keulemans del. et lith. West, Newman imp.

GOULDIAN FINCH
Poephila mirabilis.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Gouldian Finch.

(*Pœphila mirabilis.*)

By Wesley T. Page, F.Z.S.

I have only used one specific name for this bird, since the Red, Black, and Yellow Headed variations are certainly not species but merely varieties of the same species; however as specific distinction has been given, and as there is strong probability of the Yellow-headed variety being perpetuated as a race, the present specific names (as under) may be regarded as a convenience.

Red-head. *P. mirabilis.*
Black-head. *P. gouldiæ.*
Yellow-head. *P. armitiana.*

It will only be necessary to describe the plumage of *mirabilis*, as *gouldiæ* only differs in the black-head, and *armitiana* in its yellow head.

Adult male.—Head to middle of crown, face and cheeks, rich velvety carmine*; chin, throat, and narrow border to the carmine of head and cheeks, level shining back; the black throat and head border is followed by a narrow edging of cobalt blue, which is beautifully merged into the green of the upper parts and ultramarine blue of the lower; remainder of head, neck, back and upper wing coverts, shining green, washed more or less golden on the neck and downwards; flight feathers, greyish-black, with their outer webs light green, washed slightly dusky; upper tail coverts, cobalt blue; tail, black with ashy tips, the two central feathers being much elongated, and deep black; breast and forechest, intense purplish blue; hind chest and abdomen rich saffron-yellow; under tail coverts, white; under side of tail feathers, ashen, blackish in the central portion. Beak, purplish-flesh colour, tipped and lined rosy-carmine; legs and feet, pinkish-flesh colour; iris, rich brown. Average length by comparison of two dozen skins; ♂ 4·5″; ♀ 4·3″

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* In the plate the carmine of the head is represented by deep scarlet in consequence of the evanescent nature of carmine paints, Mr. Keulemans telling me that these more or less rapidly lose their brightness.—Ed.

Adult female.—Much duller than the male, altogether lacking the refulgence so characteristic of his plumage, the carmine head and facial patches more restricted, upper tail coverts pale emerald green; the central tail feathers but little longer than the outer ones; breast, rosy lilac; abdomen, pale yellow.

Young.—The nestling plumage is light dusky-green, without any of the lustre or lovely markings of the adult birds. While a change soon begins to take place, it is a fairly protracted one. The back becomes bright green, (but not yet the green of the adult), blue appears at the back of the neck, and a small black patch on the chin; the head becomes spotted and streaked with red, the breast with purplish in the male and pale lilac in the female, and the belly yellowish. These changes, which are brought about by a growth of colour in the plumage and not by an intermediate moult, continue to increase in intensity till the Spring moult, when the young assume the brilliance of the adult birds. At the same time their plumage does not attain its full refulgence, or the colour areas their full size, till after the second moult.

The colour changes in the young are direct both in the Black and Yellow-headed varieties, and not gradually through black to red, but direct to the plumage of the respective varieties.

The different varieties readily interbreed, and their progeny appears to come true, *i.e.* either Red-heads or Black-heads; and both varieties frequently occur in the same brood. It must be noted that Black-heads mostly produce their own kind, and the Red-heads the same; but at the same time this is not absolute, for we have a fully authenticated record that Dr. Ramsay bred all three varieties (Blacks, Reds and Yellows) from a pair of Black-heads in his Australian aviary. This experience is not an isolated one, but the Yellow-headed variety is extremely uncommon. There is nothing remarkable in imported birds of the same colour producing mixed broods, for a Black-headed female in captivity will invariably choose a Red-headed mate, even though there be several vigorous well coloured specimens of her own kind present; from the freedom with which this choice is made, I am of opinion that the two colours freely interbreed in a wild state. The aforesaid Dr. Ramsay's collector shot from the same nest a Red-headed ♂ and Black-headed ♀.

The Yellow-headed variety I have never possessed, and have only seen one; neither has my friend, Mr. J. B. Housden (who has privately imported hundreds of these birds) ever had one pass through his hands. On the other hand the Rev. H. D. Astley has possessed one and I believe still possesses it, whose head was of a rich gamboge colour. Mr. Keulemans has also seen one, which had yellow feathers on the back and scapulars, as well as the yellow head.

Occasionally a specimen may be seen intermediate between black and red. For instance Mr. Townsend has a female Black-head which has many of the feathers of the head tipped with dull red, these increasing in number with each successive moult. [The extensive experiments now being carried on in the Oxford University physiological laboratory with regard to the relationships—biological and chemical—between different colours in animals will in time throw some light on these mutations.—Ed.]

Gouldian Finches, with their versi-coloured plumage, vie in beauty with any of Australia's many hued and gorgeously apparelled birds. They are only lacking in one respect, and that is song, for as song birds they have no song; of course they are not dumb, and to their own kind would appear to be undoubtedly fluent and fine performers, from the evident satisfaction expressed by the demeanour of the musician and his companions. Even in the aviary their soft, sibilant and grasshopper like twittering is quite audible, nevertheless they are not song birds as we regard the term. According to Messrs. Gould, North, and Campbell, their known habits in a state of nature are briefly as follows:—The nest is dome shaped, and built either in a small tree or bush, usually from about five to eight feet from the ground. They are largely ground feeders and when disturbed fly at once to the tops of the loftiest trees.* The breeding season appears to be

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* This is also the case in captivity; in my aviary if suddenly disturbed they fly at once to the highest perch, or cling to the top wire netting.

September and October, (possibly it is extended by a few weeks either way); they usually rear two broods; five white eggs are laid and incubation lasts 12 to 13 days. They gather in large numbers at the water holes, morning and evening. At these places the trappers set their nets and snares, capturing them in large numbers; it is mostly young birds that are taken.

Their wants in captivity are of the simplest; canary, white and spray millet, form their staple bill of fare, while oats and paddy rice are also eaten. Rock salt, cuttlefish, and a cube of loaf sugar, with plenty of grass in flower and other green food, should be regularly supplied. [They are better without the sugar.—Ed.] In the winter and early spring I always use French lettuce as greenfood. Green oats (*i.e.* oats in the ear), are very wholesome, and are greedily eaten when in season. My birds also pick over the soft food mixture supplied to the other birds.

It must be admitted that these lovely birds are a great disappointment and trial to many, new purchases dying off very quickly; losses with new deliveries of all kinds of birds I fear there always will be, as most aviculturists know to their cost; but once acclimatised and kept hygienically, Gouldians are neither delicate nor difficult to keep. They need space and must have a roomy cage* with plenty of perches (natural branches by preference). If confined in a small cage, they lack exercise, get over fat, and soon "shuffle off." At the same time they neither need hot-house treatment, nor will they shrivel up at the first frost; this I have proved experimentally. In a garden aviary, with space for flight and a night shelter, they are as "hard as nails" and care no more for the worst vagaries of an English winter than do our native Sparrows—in fact not so much. If care is taken to procure healthy specimens, few birds are less trouble to keep in health; their delicacy is only fancied and not real, the critical period of their life being the first few weeks in this country. They should only be turned out of doors during what appears to be a settled spell of warm sunny weather. Few of the inhabitants of my aviary are more cheerful during bad weather than the so-called delicate Gouldian Finch.

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* What few cages I use for such purposes are 3ft. by 15in. by 30in. high, well furnished with twiggy branches, having a retiring corner, which also contains the nesting receptacle.

Unless the aviary be a large one the best breeding results will be attained by including only one pair in it, as Gouldians are by no means kindly disposed to their own species during the breeding season; at the same time they are harmless to other birds, no matter how small. In a cage two pairs would spend their time quarrelling instead of reproducing their kind. For nesting they seem to prefer a Hartz travelling cage, or else a box of the cigar type.

The Talpacoti Dove.

(*Chamœpelia talpacoti*).

By Miss M. E. Baker.

The Talpacoti Doves are exceedingly pretty little birds. They are just a little larger than the Diamond Dove, being rather stouter built and not having such a long tail. The cock in colour is a pretty shade of chocolate, the back and wings being marked with black. The breast and under parts are a shade lighter, the head a lovely delicate blue-grey, the feet pink, and the beak lead colour. The hen is much lighter, and without the blue head.

The cooing of the cock Talpacoti sounds rather plaintive and sad, something like that of a Wood-Pigeon, only many times softer.

My little pair began to build last autumn, but were very unfortunate with the first nest. Having placed it too near the wire in the open part of the aviary, it was destroyed by a cat, the eggs broken and the doves very much frightened. They did not start again until the spring; since then they have done well, and reared a lot of young ones. Several times they nested in a bunch of bracken which was firmly fastened to the wall, once or twice in a little basket, and once in a small box. The cock always sat on the eggs in the day-time, and the hen at night.

After the young ones were hatched both parents sat on them for about two days, then they took it in turn as usual to mind them.

Young Talpacoti Doves grow very quickly, and when they leave the nest are both light-coloured like their mother.

My birds were very gentle while nesting, and would let me do anything with them without flying off the nest.

They live outdoors all the year round, and do not seem to mind the cold.

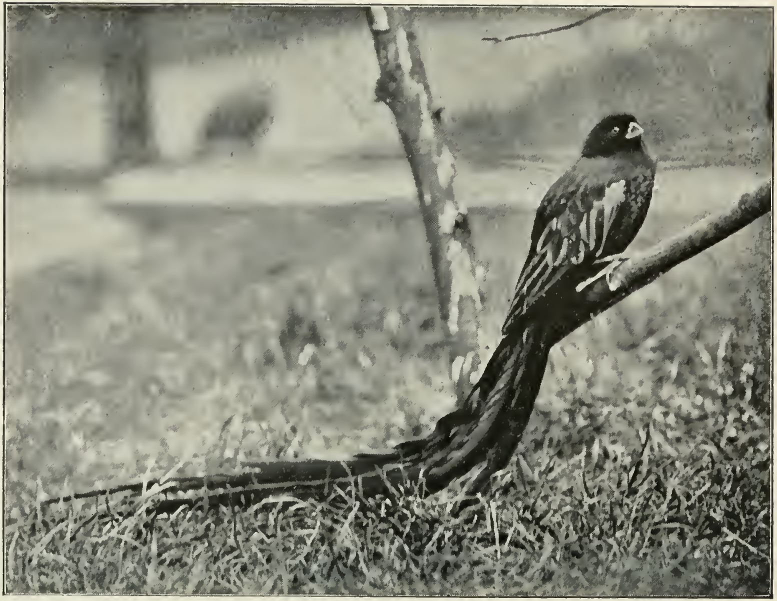
I make the inner part of the aviary very snug, putting great bunches of dried bracken about the walls for them and other birds to sleep in, so that it is very warm and cosy for them, and they seem to like it very much. Sometimes when I look in the aviary at night there is not a bird to be seen, all being safely asleep in the bunches of fern.

Mr. Dart's Aviaries.

By Dr. Hopkinson, D.S.O.

When at Kingston in September last I had the opportunity of visiting Mr. Dart, and seeing his aviaries there. As he refuses to write an account of them, I will do my best to fill the gap, since I am sure our readers will be interested to hear about the birds they contain.

The chief attraction to me was the fine collection of weavers, all, except one, (a Red-faced Weaver), in full colour and perfect condition at the time of my visit. Here were all the common and several rare species in an aviary together with four species of Cardinals, some Saffron-finches, and Pekin Robins. The weavers included Crimson - crowned, Napoleon, Taka and Orange Bishops, Madagascar, Red - headed (*Quelea erythrops*) and Waxbill Weavers, with half-a-dozen Yellow Weavers (*Hyphantornis*) of three (perhaps four) species, including the large Rufous - necked (*H. cucullatus*) and the smaller Black-headed and Half-masked Weavers (*H. melanocephalus* and *vitellinus*). All these were living apparently peaceably together, —the peace due to the fact that there was not a single female to cause dissension among them—and were certainly the finest lot of weavers I have ever seen, forming a distinctly better and more varied collection than that usually to be found in the Weaver compartment of the Zoo's Western aviary. Living with these



THE LONG-TAILED WHYDAH
(*Chera Procne*).

By permission of the Zoological Society.] [*From a Photograph by W. P. Dando, F.Z.S.*

weavers were two of the rarer Whydahs, the Red-collared (*Penthetria ardens*) and the large Cape Whydah (*Chera procne*), both in full colour, though the latter, his owner said, has grown no long tail-feathers either this year or last ; the remaining birds were Red, Green, Red-headed, and Yellow-billed Cardinals, Saffron-finches, and Pekin Robins, all of which added their share of colour to this brightly-coloured living picture.

The two other large aviaries contained, one a number of smaller foreign seedeaters, the other half-a-dozen Rosella Parrakeets, Yellow and Green Budgerigars, and a few odd weavers which had been expelled from the Weavers' Aviary, either on account of their sex or for various misdemeanours and assaults.

The Rosellas breed regularly every year, and the present party consists of the old pair and this year's family. This is not the only success in breeding which Mr. Dart has had this season. He had flying a nest of Black-headed Gouldians, but the hen has unfortunately just died after laying another clutch, a nest of three hybrids between Grey and Green Singing-finches, (the father of which by the way is an extraordinary singer), as well as another lot of eggs almost due to hatch on which the hen was sitting well, and two six-weeks old Saffron-finches hatched and reared amid the crowd and turmoil of the Weavers' Aviary. The Singing-finch hybrids resemble their Grey Singing-finch father more than their mother, but are rather smaller than he is, and have a distinct white eyebrow and other head-markings of the *Icterus*, and a pale yellow rump, which however is only visible when the birds fly,—in fact they are very like the yellow-rumped grey Angola Singing-finch, except about the head and chin. It is rather extraordinary that these two different species have mated, as in the same aviary there is certainly one cock Green Singing-finch, as well as one or two other individuals, both Green and Grey, whose sex is rather doubtful. Budgerigars of course breed in swarms, yellow as well as green, and the same may almost be said of the Zebra-finches, a small flock of which is a noticeable feature of the small birds' aviary. I also saw eggs of St. Helena Waxbills and Nutmeg-finches, the latter of which successfully reared young last year, and looked like doing so again before the end of this season. Mr. Dart also succeeded in breeding Avadavats in the aviary, either this year or the year before, and so has reason to be proud of his results in this direction.

I am sure he deserves success as he takes an immense amount of trouble with his birds, giving them constant attention and taking care to supply their every need. In the food line in particular he does them right royally, not to say extravagantly:—Each aviary seems to have one wall lined with food-hoppers in addition to the liberal supply in a pan on the ground, so that the humblest canary has the choice of a dozen or more dining-places, where a most varied menu is provided. I suggested that this must be a perfect paradise to mice, but Mr. Dart told me that he rarely saw even one,—entrance is fairly easy but exit difficult, and although one may occasionally get in, he rarely escapes to spread the news of this land of plenty, when once the boss has discovered the trespass and started on the trail with his chopper or other suitable weapon. The same lavish hand has arranged the nesting sites. Cocoanut husks, etc., must be purchased by the gross to supply the number with which the whole roofs of the inner aviaries are lined, providing homes of every variety, size and shape to suit the tastes of their feathered tenants, all of which look so well and happy, and bear such ample testimony to their owner's care.

The Ruddy-shouldered Cowbird, or Troupial.

(*Agelæus humeralis*).

By W. T. Page, F.Z.S.

This desirable bird is very uncommon as an inhabitant of our aviaries, though it has been known to ornithologists for a long period, and even at the present time, including those imported by a well-known dealer this spring, I much question if there are more than a dozen specimens in this country.

Plumage. Adult male: Glossy black; wing coverts (I have not examined the wing in the hand) yellowish-brown, forming a broadish band when the wing is slightly stretched, the band is palest on its lower portion, and quite ruddy on the upper portion; bill and feet, black; iris, very dark brown. Total length 7in., wing 4¼in., tail 3¼in.

Female: The Museum Catalogue states that she is similar to the male, but rather smaller, and her wing coverts mixed with black. If this is so, then my female is either *cyanopus*, *flavius*, or *frontalis*; anyhow she and the male came together in the same consignment, and the dealer informed me that it was the only female in the lot. She is of a dark-brown plumage without any coloured wing coverts; bill and feet dark black-brown; iris, blackish-brown. Of course this proves nothing, and the presumption is that the Brit. Museum Cat. is correct; she is a little smaller than the male, they agree well together, and the male bird looks very handsome when displaying his wings to her.

These birds have been in my possession since the early spring, and have been in my large outdoor aviary (which contains about 60 birds, a mixed lot of Parrakeets, large and small Finches, Buntings and Grosbeaks); they have been amiable and well behaved and have not harmed their smallest fellow captive; their one fault perhaps is an inordinate interest in the interiors of nesting receptacles. From this cause I have undoubtedly lost one or two interesting clutches this season, but as I am not prepared to exclude my old favourite the Yellow-bellied Liothrix (which is quite as bad as any Cowbird in this respect) I saw no reason why I should forego the pleasure of keeping this interesting bird, and, strange to say, the Diamond Doves, whose nests are indeed frail and small structures, have reared several broods and in most exposed situations.

In appearance the male is certainly a fine bird, and so is his mate, for they are both upstanding and reachy in carriage. Power of song he has none; the only note I have heard him utter is a caw, somewhat similar to that of the Rook, but pitched in a different key, and a little more mellow. I have not found it either unpleasant or monotonous. But when he appears at his best is during the time he is showing off to his mate. He usually chooses a small stone, or other elevation (seeming to prefer something more solid than a branch), then proceeds to poise himself well on his feet, tilts the chest towards the ground, half opens his wings, spreads out his tail, the wings all the while being kept in a sort of tremulous dither, and keeps running, or rather mincing to and fro, on his toes, uttering all the while his caw, working into it several inflections that are absent on other occasions. All this time the female takes but little notice of his exertions, till he follows her up with a few pecks of remonstrance; then they sit and feed one another, and preen or pick over each other's feathers. The bands of the lesser wing coverts stand out very prominently during the courting movements, lighting up the sombre but lustrous plumage with quite a dash of colour; in fact the whole bird seems quite transformed during this period into a bundle of "nerves."

These birds when they first came to hand were placed in an indoor aviary about 5ft. by 4ft. by 7½ft. high, but here they were very wild, though they had for companions a very quiet pair of Varied Lorikeets; as they did not quieten down I caught them up and turned them out of doors, where they settled down at once, and they certainly now claim my attention quite as much as many of their more gorgeously apparelled companions.

In a state of nature I gather that this species is gregarious, feeding together in flocks on the ground; they frequent marshy tracts, the nest being usually built on rushes growing in the water; the eggs are white, with just a suspicion of a greenish-blue wash spotted with brown and black at the larger end, the smaller end is very pointed, and the clutch is usually four in number.

Their movements and demeanour both on the ground and in the branches are exactly those of the English Starling; the bill is pushed into the ground and then opened out, very effectively turning up the soil; in a similar manner the seed is scattered from the pans, and simply sent flying around; and the soft food would share the same fate but for its more adhesive character, but this by the same means is most effectively sorted over, and only that which is to their liking is taken.

Food: I should certainly give them seed, fruit, soft food and some live insects. In my aviary they have access to Dove mixture and Parrakeet mixture, Canary, millet, fruit, soft food, mealworms, beetles, etc., and they certainly sample the lot, and are in the best and tightest condition imaginable. I may say, so as to anticipate a possible query, that my soft food mixture consists of Spratt's Partridge meal, fine crissel, crushed Osborne biscuits, dried silkworm pupæ, dried flies, scalded grocer's currants, and boiled potato, or grated raw carrot. If I require any for very delicate insectivorous or semi-frugivorous birds, then I add a liberal portion of sponge cake and also ripe fruit where it is required.

Habitat: Cuba.

Editorial.

AN EPIDEMIC AMONG BUDGERIGARS:—I have lately examined a dead bird of this species, sent to me by Miss Little, which had died of enteritis. The history of the case is so instructive that it seems advisable to make a special note of it.

After doing remarkably well for the first part of the season, the birds began to die off, starting with the young ones, at the rate of sometimes three or four a day. Before death "their breast bones became very "sharp as though they had been starved," and up to the time of this one's death (Oct. 5th) over three-fifths of the entire stock had died, leaving only twenty alive.

The owner stated that they were fed on "white "millet, canary seed, and a few oats, all from a good "place, and the rest of my foreign birds have the "same seed and are all right." Chickweed, &c. was also given and their lodgement was in an outdoor aviary.

So far everything seems to have been correct as to their treatment, and the one thing that requires explanation is why these birds should have become thin, (betokening more or less chronic illness), and died in such alarming numbers while the rest of the birds remained well. The clue is obtained when we learn further on that when feeding the young they also had "soaked bread and water, the bread squeezed out "almost dry" and the reason for the epidemic of "summer diarrhœa," (for that is the popular name for septic enteritis), becomes apparent. I have repeatedly investigated epidemics of this nature among Budgerigars and other Parrakeets, and in each case they have attacked communities fed in this manner. In Vol. II. of *Bird Notes*, pp. 238 and 239, will be found a concise reference to the septic tendencies of this food, and in the same volume and the next will also be found some instructive correspondence on the subject.

I may perhaps venture to point out another lesson to be learnt from this case. Had the fair owner of these birds sought competent advice at the onset of the epidemic, instead of leaving it till the end of the season, she would have saved the great majority of her stock and would not be compelled to say that "such heavy losses are most disheartening." And what are we to think of the perversity of those, who not being medical men, and knowing absolutely nothing either of diseases or their causes, still persist in advising aviculturists to their detriment? Was Legros a physician simply because he kept many slaves?

EGG FOOD, A PRO AND A CON.:—In the *Avicultural Magazine* for October there appeared the following letter:—

> Sir,—On the 26th August my hen Chinese Quail laid a thin-shelled blue egg upon the sand of my smaller outdoor aviary, and in the most sunny part of it. My Gouldian-finches, which have a second nest of young ones in the aviary (I fear the young of the previous nests have all died), broke a hole in the top of the Quail's egg, and I watched them for some minutes eating the shell and sucking up the raw albumen, heedless of the spectre of septicæmia with which our cage birds have of late years been confronted.
>
> It seems a strange thing, when one considers that the Gouldian-finch never touches soft food, to find that even it cannot resist the delight in that pabulum which we are expected to believe is so serious a menace to bird life, that none but an

unreasoning ignoramus would dream of using it. Alas! I fear the wise are very few in number.

* * * *

Out of consideration for the writer's feelings when he comes to the analysis of his "argument" by the cold light of reason, as opposed to the glamour of the midnight oil, I withhold the signature attached to this curious letter. I will even refrain from enlarging upon the self-evident fallacies contained in the "argument." They will be sufficiently apparent to the intelligent subscribers to this journal, as well as to the numberless readers in those Free Libraries on the tables of which it finds a monthly home before being bound up to take its place in the Reference Room. But for the enlightenment of the writer himself, (who, although not a member of the Club, I know reads this magazine), I will append a parallel to the intelligent Gouldians, who, although they knew not the taste of soft food (containing egg), no sooner saw a soft shelled egg on the ground than they immediately reasoned out (by hereditary instinct?) that at last they had found the philosopher's stone! A year or two ago I bought a dozen Goldfinches in the autumn, adults and grey pates. In the bottom of the flight cage which served as their temporary home I put a handful or two of "mixed seed." The next morning oddly enough I found that the only empty seed husks in the cage were those of the—inga seed! It is evident that these birds, bred in these climes, had never before seen this seed, and if they (whose brains are the largest in proportion to their bodies of all known species, being $\frac{1}{14}$ of their entire weight), jumped at once at the chance of the inga seed, then by the light of the Gouldians' behaviour that seed must be the best in all creation. In this place I myself express no opinion about it, but Dr. Butler says it is "poison." Indeed he loves to say it.

So much for the "pro": the "con" is infinitely more simple. Mr. F. Howe writes to me as follows:—"I do not give egg in any form and my birds appear "to do well without it." The plaintive wail—"Alas! "I fear the wise are very few in number"—with which the exponent of Gouldian wisdom concludes his letter, may be true. We have heard it before in somewhat different words from an even greater man than its present propounder, but the abjurers of the egg foolishness seem somehow to be gradually increasing in number. W. GEO. CRESWELL.

Notes on the Foreign Birds at the L. C. B. A.

The growing custom of housing foreign birds in large outdoor aviaries is undoubtedly the cause of keeping many rare and beautiful specimens away from Shows; this and possibly the early stage of the season, (many foreigners not yet being through the moult), were responsible for keeping the entries down to fifty-four, and consequently for the cancelling of many classes. However among the birds shewn there were some rare and exquisite exhibits, fully worth a long journey to see.

First and foremost must be placed Mr. S. M. Townsend's beautiful Racket-tailed Whydah, seen in public, we believe, for the first time on this occasion. With its rich plumage of velvety black and tawny brown, finished off by an eight-inch tail of the curious shape which gives rise to its name, it made us eager to think of future consignments arriving over here.

The Blue-crowned Hanging Parrakeet, another beautiful rarity belonging to the same owner, deserved equal notice. It was very tight in feather but still shewed a few pen feathers lingering on the head. Its plumage is roughly as follows: Crown, bright blue; general body colour irridescent green, lighter on the underparts, yellowish at the flanks and vent; upper tail-coverts, centre of throat and chest, glowing crimson.

Another very rare and showy but very noisy bird was Mr. Dewhurst's Red-banded Lorikeet. Its conspicuous beauty however would go far to make up for its shortcomings. We also noted Mrs. Cooper's fine young Senegal Parrot, a beautiful bird in finest condition, but not yet in adult plumage.

Mr. S. M. Townsend's now well known Black-backed Tanager took first honours in the Tanager class, and rightly so; this gentleman shewed here another Tanager, unnamed in the catalogue, which after careful comparison with the figure in Sclater's "Monograph of the Genus Calliste" would appear to be the female Black-backed Tanager; it is to be hoped its owner will make some attempt to breed them. There were also shewn some grand specimens of male and female Green Tanagers (different owners) and the Blue-wing Sugar-bird.

The class for Budgerigars etc. also contained (2) Blue-winged Lovebirds (Passerine Parrakeets), (3) Rosy-faced Lovebirds, (H. C.) ditto and a pair of good Green Budgerigars. In that for All Parrakeets etc. were also shewn (2) a good Varied Lorikeet; (3)

Swainson's Lorikeets, grand colour and very tight; (4) a good White-eared Conure; (V. H. C.) Crimson Lory and Ring-necked Parrakeet, very fine condition; (H. C.) a very fine pair of Redrumps, which in our opinion might have been 4th.

The class for Parrots also contained four good Grey Parrots, one 2nd and another H. C., the second prize winner being an especially fine and well-marked bird. The third prize was taken by a well-conditioned Greater Sulphur-crested Cockatoo. All these birds were good linguists.

Avadavats, Waxbills, Mannikins etc. This was a good and interesting class. (1) Orange-breasted or Zebra Waxbills, well shewn with a cocoa-nut shell as shelter in the cage. The birds making good use of this constituted a pretty picture and attracted much attention. (2) White Java Sparrows, a good exhibit. (3) Zebra Waxbills, very rich in colour. (V. H. C. & H. C.) White Java Sparrow and Parson Finch. There were also some good Nutmeg Finches and St. Helena Waxbills.

A. O. S. of Waxbills, Weavers etc. A large and varied class of beautiful and well shewn birds, second honours going to a grandly coloured and tightly feathered pair of Violet-eared Waxbills. (3) ditto. (Extra 3) Ruficauda Finches. (V. H. C.) Red- and Black-headed Gouldians, Pintail Nonpareils (good pair, *outdoor moulted*,) Paradise Whydah. (H. C.) Parrot Finch, very fine pair Pin-tailed Whydahs, and Ruddy Waxbill (so catalogued), said by some to be a Fire-tailed Waxbill, but appearing to us to be Jameson's Ruddy Waxbill (*L. jamesoni*). It was however very difficult to get a full view of its entire plumage. Othe exhibits were a fine Madagascar Weaver, Pectoral and Long-tailed Grassfinches, and a Rufous-necked Weaver.

The management was excellent, and the hall one of the finest and most suitable for its purpose, being well lighted, warmed, and free from draught. The Show was opened by the Lord Mayor-elect, Sir William Treloar, and was a complete success, the profits going to the Cripples' Christmas Hamper Fund. The exhibitors of foreign birds are to be congratulated on the excellence of their exhibits, not an ill-conditioned bird being found in this section.

Review.

The Crystal Age. By W. H. Hudson, author of "The Naturalist of La Plata," etc. 6/-, *2nd edition. T. Fisher Unwin.*

A charming romance, first published as long ago as 1887. A book most certainly for the few, rather than the many, for it is impossible to merely "pick up" this fascinating dream of a future.

The brief extract from "The Faërie Queene" on the title page suffices to whet one's appetite immediately, and we rise from the perusal of "A Crystal Age" as from a feast of Spenser, refreshed—in every sense of the word—and thankful such books are to be found. Here and there are exquisite touches of fancy and fine flights of imagination; the simple life, the freedom and fearlessness of all bird and other animal life, written in the pure and interesting style we expect from Mr. Hudson, makes the possession of such a book a very desirable one.

The splendid isolation of its womankind and the beauty of its home life in this dream world are in utter contrast to the wants and demands of the Lady Suffragists of to-day!

There is an old saying that one always returns to one's first love; perhaps for that reason "A Crystal Age" will never be so popular as "The Naturalist of La Plata." The one charms an idle hour away—the other holds us for all time.

Post Mortem Reports.

(*Vide Rules*).

LAVENDER FINCH. (Mrs. Mellor). After a very short illness this bird died of what proved to be pneumonia.

GOULDIAN FINCH. (Mrs. Mortimer.) There was a fracture of the skull, accompanied by extensive extravasation of blood in and upon the brain. W. GEO. CRESWELL.

Correspondence.

THE FEEDING OF TANAGERS, &c.

SIR,—I am expecting in a few days a pair of Scarlet-crowned Hanging Parrots, also a Blue Sugar Bird and a pair of Tanagers. I should like to know how to feed, whether they require any heat, also if they are fairly robust or delicate, and whether they are short-lived or otherwise. W. H. P.

[The following answer has been sent to this correspondent. ED.]

In answer to your letter, my Hanging Parrot eats canary seed and a small piece of sponge cake soaked in water; if yours will eat fruit they will be better for it. The Tanagers and Sugar Bird want a good insectivorous food (without any yelk of egg), and plenty of ripe fruit. The Sugar Bird may require a very little soppy bread and milk, but you will be able to see how it gets on with its food. I think that all these birds, with the exception of some of the hardier Tanagers, are rather delicate and require some warmth.

One cannot say very much about the life of these birds; some of mine I have had for nine years, and one has been fourteen years in a cage. Tanagers and Sugar Birds should be kept in as large a cage as possible. S. M. TOWNSEND.

AVICULTURAL RECOLLECTIONS.

SIR,—Some experiences of early bird keeping may be of interest to your readers.

I think I obtained my love of birds from my grandmother, for as far back as 1872 I can remember her always having a pet Bully which was exceedingly well trained and tame, had his own bath rug, and took the bath every day at 8 a.m. regularly.

I used to essay to bring up Thrushes and any other unfortunate bird I could get, always on hard boiled egg, and always with the same dire results, as I do not remember any living to grow up. Then I started foreign birds. In those days heat and no air "for fear they should catch cold," was what we were told was absolutely a necessity for the unfortunate birds if they were to survive this climate; so having bought a big cage with *glass all round* I then got a pair of Blue Robins. They were lovely birds, and lived quite three months under the trying circumstances of their life—no draughts, *no air*.

I can remember Mr. J. Abrahams shewing me his first "yellow" Budgerigar, and when the Scarlet Tanagers began to come in to England he told me that rotten pear was the best food for them! At that time they were very dear and I only looked and longed. Then I had every sort of small foreigner, with very bad success, as in those dark days of ignorance there was no *Bird Notes* to enlighten us, and all foreign birds were supposed to die, unless stuffed up in hot airless rooms.

Then I bought an Amazon Parrot from Mr. Abrahams. It was a wonderful talker and went round the world with me. The following anecdote of her capabilities in the talking line may amuse our members. As one is not allowed to have parrots in a cabin on board ship she was sent to the cook, (to be kept warm). On arrival at San Francisco my maid, an old Scotch woman, took her to her bedroom. Next day the manager of the hotel came to me and complained of the appalling language *my maid* was using in her room, and "would I please stop it, as the gentlemen next door would not stay unless she did." It turned out to be Polly—she had caught up the most dreadful curses from the Lascars and firemen during her three weeks' journey from Sydney, and my poor maid had the benefit. However, Polly soon forgot her bad habits, I am happy to say.

While in Norway, fishing, I got a Starling. She was the tamest bird I ever had, and used to follow me all over the house and grounds, but it nearly drove us all mad with its everlasting call. It got on everyone's nerves. I think a Starling and a Hedge-Sparrow both have the most irritating call when young.

Now I have about seventy birds, and am soon going to build aviaries on quite a new plan, so as to have no more than three species (one pair of each) in each aviary, and by this means I think breeding operations will be more likely to prove a success.

A pair of Cordon Bleus have laid in all seven eggs this year, none of them fertile, and this in my window aviary. I find all the Estrildæ love pampas grass. They carry it about in their mouths dancing their most ridiculous love song, and fill the nest with it. At this moment the cock Cordon Bleu has an enormous piece of hay and moss hanging from his tiny beak and is hopping up and down singing hard.

I have not any soft bills, but when the new aviaries are up I shall start them too. E. W. VERNON.

NEST OF THE DIAMOND DOVE.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Diamond Dove.

(*Geopelia cuneata*).

By Wesley T. Page, F.Z.S.

Trivial names:—Speckled Ground, Graceful Ground and Red-eyed Dove, and also that of Diamond Dove, which is now almost exclusively used.

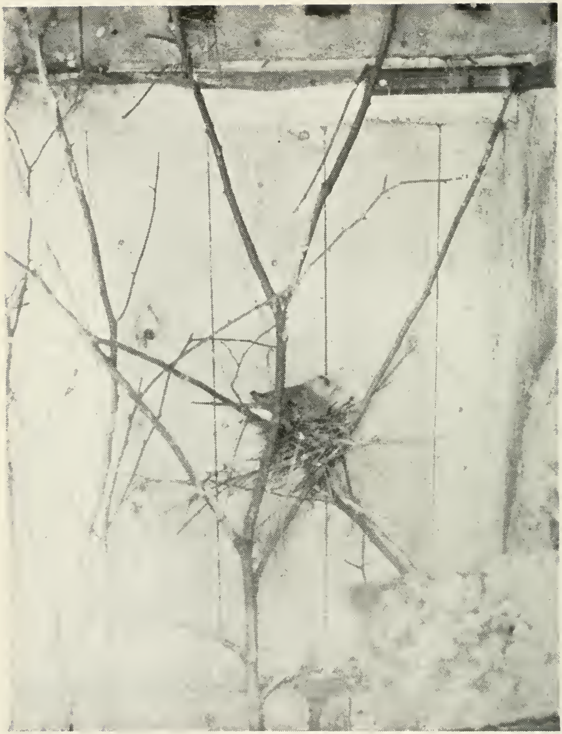
Most Doves are rather dull, some even stupid, but this cannot be said of *G. cuneata;* however, apart from their dulness, doves make an agreeable variety in an aviary, feed largely on the seeds other birds scatter about, and never interfere with their smallest fellow captives, reserving their very pronounced animosity for their near relatives. As regards beauty, both as to contour and plumage they are unsurpassed by any other order of birds. The exquisite harmony, the chaste and soft colouring, so beautifully blended as to be simply beyond description, must be seen to be appreciated; and of the many species that have been imported, the present diminutive one is certainly one of the most beautiful.

Habitat: This is pretty generally distributed over the whole of Australia, and the bird is very common on the Murray and Darling.

Plumage: This can only be indicated; it certainly cannot be adequately described. Adult male:—Head, neck and breast, French grey, or perhaps transparent lavender would be the better term ; back and shoulders, cinnamon-brown ; wings, darkish lilac-grey with an olivaceous wash, thickly spotted with small white spots (Mr. O. E. Cresswell in *Avic. Mag.* for 1896, aptly describes them as studded with little diamonds) ; the under parts and under tail coverts are a delicate pearl-grey ; the larger wing feathers are brown, with their inner webs rufous ; the central tail feathers are grey, with black shafts and tips, the outer ones being pure white, blackish at their base ; there is a circlet of red naked skin round the eyes ; bill, olive ; legs and feet, ruddy flesh colour ; iris, red.

Adult female : Similar to the male, yet is readily distinguished by the browner colouring of the head, neck, and entire upper surface, also the white wing spots are larger and not so numerous as those of the male.

Young : The young are almost naked when first hatched, and their skin is blackish and light grey, in patches ; the darker parts being principally on the upper surface, the head and wings standing out much darker than the rest. At three days old they are covered with long blackish hairs, some being lighter and of a pinkish tinge. At six days they are simply a mass of spines ; at ten they are fully fledged, except that the tail and flight feathers are short. They leave the nest on the eleventh or twelfth day, and at fourteen days are fairly strong on the wing. The plumage is similar to that of the adult female, but is duller and washed with tawny, the neck, breast, and under parts generally are pale tawny-grey, as is also the top of the head, slightly ruddy on the front of the crown ; tail and flights, darker, outer tail feathers white, as in the



DIAMOND DOVE ON THE NEST.

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adult; the white wing spots are entirely lacking, but practically each individual wing feather has a buffish bar across the end, the extreme tip being blackish. At two months the adult plumage commences to show itself, and at three and half months there is little difference between them and their parents.

Wild Life: I will only here quote two short extracts from the writings of Sturt and Gould.

"All that we read or imagine of the innocence of "the Dove is realised in this beautiful and delicate "little bird. It is very small, and has a general purple "plumage approaching to lilac. It has a bright red "skin round the eyes, the iris being also red, and "its wings are speckled over with delicate white spots. "This sweet bird is common on the Murray and "Darling, and was met with in various parts of the "interior, but I do not think it migrates to the North-"West. Two remained with us at the Depôt, in lat. "39° 40′, long. 140°, during a greater part of the "winter, and on one occasion roosted on my tent ropes "near a fire. The note of this Dove is exceedingly "plaintive, and is softer, but much resembles the coo "of the Turtle Dove." (Sturt).

"Its natural food being the seeds of grasses and "leguminous plants, it is observed more frequently on "the ground than among trees. I sometimes met "with it in small flocks, but more often in pairs or "singly. It runs over the ground with a short bob-"bing motion of the tail, and while feeding is so "remarkably tame as almost to admit of its being "taken up by the hand; and if forced to take wing, it "merely flies to the nearest trees, and there remains 'motionless among the branches until it again de-

"scends to the ground. I not unfrequently observed it "close to the open doors of the huts of the stock-keepers "of the interior, who, from its continually being before "them, regard it with but little interest. The nest is "a frail but beautiful structure formed of the stalks of "a few flowering grasses, crossed and interwoven after "the manner of the other Pigeons. It utters a rather "singular note which at times very much resembles "the crowing of a cock. The eggs are white and two "in number, eleven-sixteenths of an inch long, by "seven-sixteenths broad. The sexes, although bearing a general resemblance to each other, may be "readily distinguished by the smaller size * of the "female, by the browner hue of her wing feathers, and "by the spotting of their upper surface not being so "numerous or so regular as in the male." (Gould).

Their demeanour in the aviary is very similar to the above description; they are essentially ground birds, scarcely ever using the branches save as a foundation for their cleverly woven nest; when not on the ground they almost invariably use a shelf, ledge, or top of some nesting receptacle as a resting place. Their tameness too is remarkable after they have been in the aviary a few months. I have never had one of this species injure itself by flying against the top of the aviary, and when sitting you have actually to touch the female before she will leave the nest. At the same time it must not be gathered that they are sluggish on the wing, far from it, their flight being extremely

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* In many individuals the difference in size is infinitesimal and, were it not for the browner hue of the plumage, would be an unreliable guide; i.e. one which only a trained eye would detect. In nestlings however the sexes can be picked out by their larger or smaller size. W. T. P.

YOUNG DIAMOND DOVES IN NEST.

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rapid and of an undulating and darting character; yet in my aviary I have never seen them really scared; even when their arch enemy grimalkin has been about, they have simply flown to the other end of the enclosure. I have never heard the crowing call of the male which Gould describes; but when showing off to his mate his coo may be said to be sonorous and of a slightly booming character. The courting attitudes of the male are very effective and interesting, and certainly none of his beauty or attractiveness is hidden or kept in the background during these movements. He follows the female up and frequently goes through his display, this consisting of,—pausing abruptly, the breast almost touching the ground, the back elevated, the tail erected nearly perpendicularly and spread out fanwise to such an extent that each feather is separated from the other; the wings also are elevated, partially outspread, and the flights separated similarly to the tail. In fact this performance shews a good deal of likeness to that of the Peacock, except that he remains stationary while the tail and wings are in this position. Though I have made the effort many times, I have so far been unable to secure a photograph of the bird in this attitude.

Breeding: So far I have had no difficulty in getting these birds to breed. They are excellent sitters and feeders, the only losses among them occurring through their young being killed by other birds when in a mixed collection, for though fully feathered they appear rather helpless during their first day out of the nest, and helpless birds do not meet with much compassion from the more vigorous occupants of the aviary. To give an idea of the breeding capacity of these birds I will give the doings of a single pair in my aviary this season. The female was there all last year, with a male which was slightly deformed in one wing; he died owing to an accident; a fresh male was procured in April of this year, the result of this pairing being as follows:—

The first nest (illustrated in the accompanying photographs) was built against the back of the shed having taken two days in building; though one side touched the back of the aviary, it was really built in the fork of the branches and was not attached to the woodwork at all; the greatest diameter was but four inches. (This is the average size of all of these nests constructed in my aviary). First egg was laid June 11th; two days after the completion of the nest, the second on the following day; they were hatched by 6 a.m. June 24th, and the young left the nest, one on July 5th, the other two days later, both flying about the aviary on July 8th. They were in partially adult plumage at 7½ weeks, when they left my possession for the public aviary at St. Helens.

2nd nest: The above nest was repaired and two eggs were deposited by July 10th, but both were broken three days later, owing to the interference of a Virginian Grosbeak.

3rd nest: This, the only one built on a solid base in my aviary, was placed on the quartering (2in. wide) at back of shed, partially screened with branches; two eggs were laid and the birds were sitting on July 31st, hatched August 12th, the young left the nest August 23rd fully reared.

4th nest: Built entirely in the branches with withered rape leaves, which they gathered in the aviary from growing plants, grass stems and bents, the whole very ingeniously and compactly woven together. Sitting on two eggs August 30th; hatched Sept. 12th, left nest Sept. 23rd; one of this pair was killed on Sept. 24th by some occupant of the aviary, the other was fully reared and is now (Oct. 31st) in partial adult plumage.

5th nest: The above nest repaired; the parents began to sit on October 3rd on two eggs, which were hatched on October 15th. The young left the nest October 28th, and the next day both were killed by some other occupant of the aviary. They were a very strong and well developed pair of birds.

It will be seen from the above that incubation lasts from 12 to 13 days, (the times given are strictly accurate and were taken by myself), and that the young invariably leave the nest when eleven days old, and gather strength for flight on the second or third day afterwards. The first day they do little more than flutter along the ground, though quite strong on their feet; and it is at this time they fall a prey to any maliciously disposed inhabitant of the aviary.

With regard to the hardiness of this species, of this there can be no question, for they have ailed nothing either Winter or Summer, neither do they give any trouble during the moult. Unless the aviary be very large it should only contain *one* pair, and the young as soon as they become adult should be removed, since these birds are very intolerant of their own species.

As regards diet, they had access to canary, white millet, and a mixture of oats, wheat, dari, rice in the husk, hemp and sunflower; and they took freely of all but the oats and sunflower. I never saw them touch soft food, but they ate a good deal of green food (French lettuce and grass in flower) while feeding the young.

A pair of these birds should be in every mixed collection; they are certainly one of the smallest, prettiest as to colour, and most elegant of their tribe; and as stated at the commencement practically live on the food the other birds scatter about.

Bird-Life on an African River.

BY DR. E. HOPKINSON, D.S.O.

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A west coast river. Miles and miles of dull-green mangroves stretch up and down on either side as far as the eye can reach, the thick mud-stained water slides past without a sound, and the midday sun flaming overhead blisters the paint and scorches the woodwork of the old white schooner lying at anchor in mid-stream, turning her littered deck into a frizzling inferno. But in spite of this about her deck lie black forms, those of her crew, sleeping in various attitudes and the scantiest of clothing—some in the full glare, which to them is apparently only grateful and comforting, others in the narrow belt of shade thrown by the motionless foresail. Aft on the roof of the miserable box, dignified by the name of "cabin," lie two more sleepers, the captain and his mate, black like their crew, but perhaps a trifle more dressy in their attire, or rather less undressed. Inside that cabin (a Hobson's choice for him between the stewy heat there and the shadeless furnace outside) a single white man sits or lies in pyjamas, trying at one time to pass the time with some month-old papers or a much-worn pack of patience cards, at another to imagine that he is getting some sort of a siesta.

Another day, another scene, but on the same river and the same schooner, though now she is moving slowly up-river, not however by means of her sails. There is still not a breath of air, and all her canvas, though hoisted in some vague hope that it may sometime be of use, hangs motionless and idle. It is the muscle of her crew which forms her motive power; four of them are in the dingey pulling at their oars for all they are worth, and just helping the old boat to move along a little faster than the tide. This they do for six-hour spells at a time all through the day-time heat or the cooler but damp and mist-laden air of the night, as long as the tide is favourable, occasionally relieving the monotony of their task with a monotonous sing-song or snatch of weird whistling, whilst the sweat pours off their shining naked bodies till one feels almost inclined to make sure that they have a baler on board. Meanwhile the captain lolls at the helm, smoking or half asleep, but giving just enough attention to keep his vessel's head more or less up-stream and to avoid any outlying mangrove-snag or half-stranded palm-trunk, floated down from higher up, which may present itself if his course happens to take him near either shore. This will go on till the tide turns and makes it useless to try to make headway, when the anchor will be dropped and the crew turn to for "chop" and another six-hour rest till the flow begins again. Then to work once more; "Haas' de anchor all" is the order, and after the usual shouting and noise up it slowly comes in response to the efforts of the sailors straining at the clumsy windlass which fills up the forward deck. This time it may happen that there is some breeze (although on this particular voyage the actual sailing certainly did not amount to two days altogether), and then with luck and a following wind the boat may do seven or eight knots for a bit; but, unfortunately, even when there is a breeze, tacking is more often than not the order of the day, and then her speed is hardly better than that the oarsmen produce, as it means a continual zig-zag backwards and forwards across the river, gaining a mile perhaps on one tack, only to lose most of it again on the other and in the time it takes the ship to go about.

The above are no imaginary scenes nor pages from the journal of some early trader or slave-ship skipper on the African rivers, but a record of to-day, of happenings to the writer, a colonial surgeon, on his way to his headquarters on the upper part of the Gambia river. Fate, in the shape of a breakdown of the steamer which usually runs more or less regularly up and down the river, had been unkind, and he has had to return to the methods of river-travel in vogue before steam made wind and tide of little account, and to experience what his ancestors, had they been African traders, went through on their voyages up and down the coasts and in the rivers they explored for gold, ivory or slaves, from the days of Hanno until the era of Messrs. Elder Dempster & Co. For days and weeks together they and their vessels must have lain in the rivers at the mercy of the tides, content if, as on this trip, each night they were out of sight of the point they left in the morning. They must have sweltered in the same heat, breathed the same heavy air, cursed as they chewed at the same stringy chicken and fought vainly, but everlastingly, the same stinging flies all day and the same hosts of mosquitoes all night. In those days, however, there must have been some compensations denied to the present-day traveller; various excitements at least there would have been to help the time along. Canoe-attacks by the warrior Mandingoes, the natives of the country, cannot have been infrequent; a leopard might at any moment spring off some overhanging tree, as the vessel slowly skirted the shore or lay tied up for the night, and such incidents as these, together with their fresh-caught slaves, must have given variety to the days and at any rate kept all on board more or less on the *qui vive*, while of course they always had the pleasureable excitement of profitable trade, and were sure to be buoyed up with the hope of returning with their holds full up with goods of price—ivory, gold, palm-kernels or slaves—received in exchange for the trumpery cargo of beads, looking-glasses or stair-rods, which were under hatches when they entered the river. For in those days the coast trade must have been indeed profitable, and one does not wonder that the cargoes brought back would always allure plenty more venturers to fill the place of those who would never return again, and whose bones were resting far away beneath the rustling palms or at the bottom of some dark and alligator-haunted creek. Half of each crew might sicken and die from fever, sun or drink, as must have been the case in the careless days of old, long before the time of quinine and mosquito-nets, and the remainder come back but shaky yellow skeletons, but the lust for gold would quickly fill the places of the missing ones.

Now, however, on such a voyage, lasting nearly a fortnight, when head-winds, calms and strong adverse tides are met with, time naturally hangs very heavily on one's hands, so that watching the birds and beasts (the latter monkeys, hippo and alligators), as the boat crept slowly along or lay at anchor awaiting a turn of the tide, has been my chief amusement in the airless heat, and some distraction from the insect pests, large and small, which swarm on a "blackman" boat.

For the first hundred miles or so bird-life is scarce, as for this distance the river is fringed with a continuous unbroken belt of mangroves, among which birds or animals, even when present, are practically invisible from a passing boat; here, therefore, as soon as the Gulls, Terns and other sea-birds are left behind, one may go for miles without seeing anything but an occasional Eagle or Kite overhead, Egrets and small Blue Herons, with perhaps a Pied Kingfisher or two on the lookout for fish on the edges of the mangrove wall. Towards evening a few more signs of life appear, Pigeons and Doves, screaming parties of fast-flying Parrots, Hornbills in pairs, rising and falling in the air as their slowly-flapping wings bear them on their course, and home-returning Starlings fly across, while the Egrets begin to hurry up or down the river in long-drawn lines or scattered flocks seeking their chosen roosting-places; for these birds make a habit of sleeping in large parties on the trees at particular spots along the river, and to these they return regularly about sundown every evening from their particular and often far-distant feeding-grounds. These sleeping-sites, which are used from year to year and are therefore most prominent objects against the otherwise uniform dull-green of the mangroves, are probably selected by their tenants as the spots most sheltered from the force of the tornadoes, which during the rains drive down the river with force enough to dash a ship ashore or overturn a house, much less carry away to destruction any bird which may have been foolish enough to choose an exposed perch.

Sooner or later an end comes to all things, and eventually the last of the mangroves, which gradually thin out as the water gets less and less brackish, are left behind even by a sailing-boat, and the banks become more diversified and more interesting. They are now low and swampy, and in most places clothed with different species of palms, thorn-bushes and other shrubby growth, mostly covered with a dense tangle of creepers forming an all but impenetrable barrier between the water and the land, above which here and there tower larger trees—here a mighty African mahogany, here a grotesque monkeybread, there again a white-barked silk-cotton tree or group of slender cocoa-nut palms. At intervals a break in this mass of vegetation allows a view of the riverside swamp covered with reeds and long grass, stretching away a waving sea of green this season (November) to the more solid higher ground at some distance from the river-bank.

Here as the boat drifts slowly along, nearly the whole of the Gambian avifauna — an avifauna essentially that of a river and its immediate surroundings—may be met with as the days go by. White Egrets, large and small, Buff-backed Cattle-Egrets, Pelicans and Herons of several kinds, from the huge Brown and Grey Goliath Heron to the small Blue-Grey Bitterns standing so stolid and motionless on some branch just above the water's edge, or stalking with steps almost chameleon-like in their sedateness along the narrow shelf of mud beneath the thick shelter of the overhanging or tangle-covered bank—all these are common, as well as others of their kind. Storks and Ibis, as well as the usual river-haunting waders, Plovers, among which the Black and White Spurwings are conspicuous, Red-legged Stilts, Curlew, and a host of others. Again and again too up gets a Hammerhead, a foul-looking and a foul-feeding sort of Heron, which is found wherever there is water, and whose nests, huge masses of grass and weed fixed high up in the fork of a tree, are seen (and smelt) here and there along the banks of the river and its creeks. Doves and Black Pigeon are everywhere, and can often be shot from the deck, when the dingey is available to retrieve them; Fruit-Pigeons too, beautiful birds with green, yellow, and mauve plumage, fly overhead or are seen feeding in family parties on some "shoto" tree, a kind of wild fig, in search of which these birds move irregularly about the country, stopping in a district as long as they can find any ripe fruit and then wandering on to other places where the trees ripen later.

Wherever one gets a view of the open swamp a Black Crested Eagle is sure to be visible, perched on the dead top of some low tree, and surveying with thrown-back head and insolent stare the surrounding country; his general appearance and haughty look suggest that nothing smaller than an antelope or Bustard would be at all likely to interest his palate or tempt him from his throne, but as a matter of fact his looks belie him, as he is a coward at heart: a frog, lizard, or perhaps a wounded or fledgling water-bird is about all he cares to tackle alive, and I suspect that on the whole he really prefers chance-found dead meat to a diet more exciting perhaps, but more difficult to come by. If this bird looks like a warrior and yet has but the pluck of a louse, a distant relation of his, the Vulturine Eagle, is his exact antithesis; he looks every inch a carrion-loving vulture, and in spite of that he has the instincts of a pirate, and the courage of the story-book eagle. As a haunter of the shore, no doubt he is usually content with meals provided by the waves, stranded fish, unwary crab, and so forth, but he habitually augments his fare by assaults on fish-laden gulls or kites, scaring them till they drop their prey to provide him with an extra titbit. Nor need a gull or other bird be necessarily carrying food to prove a temptation to this terror of the shore, for he will often pursue and swoop down on any passing gull or heron, apparently in sheer delight at the scare he gives them, not in the hope of actually catching them, as on the wing his quarry is generally quicker than he is himself.

In pursuit of animals on the ground he is, however, more successful, no doubt, and must be a constant source of anxiety to the monkey-mothers in his neighbourhood. Even man he at times scorns to fear, for twice I have seen one of these eagles dash down on dogs, and in one case the terrified little beast was only rescued by its master after being badly scratched and torn by the bird's beak and talons. Again, a friend of mine riding along the sands at low-tide was once suddenly attacked in the same way. The bird kept alternately wheeling round and dashing down at his head, all the time uttering the most horrid screams and buffetting him with his clashing flapping wings, till he had his hands full to control his frightened pony, and, at the same time, ward off with his whip the vicious attacks of the eagle, which had, as far as he could see, no reason but pure malice for this unusual and unexpected onslaught. This species is more common in the lower reaches and along the sea-coast; higher up, his place is taken by the handsome Fish-Eagle, a rich brown bird with pure white head and neck. Other *accipitres* to be seen along the river are Bateleur Eagles, black with pink legs and beak, generally soaring in pairs high overhead, Kites, the ubiquitous Vultures, and many kinds of Hawk. Two of these are extremely common, a large one and a small, both grey in colour, which quarter the swamp like harriers, feeding principally on frogs and the like, but occasionally swooping down on some little bird.

The bushes too are alive with smaller birds, Flycatchers (whose table here must be always well supplied), some like ours at home, others in a striking garb of metallic black and rich redbrown with long streaming tails, the Paradise Flycatchers, while a third species, only a rainy season visitor, is a lovely sky-blue bird; besides there are two or three species of Sunbird, Black Drongoes and all sorts of Warblers, Waxbills, and Weaverbirds. Many of the latter families are well-known in England, thousands being imported annually as cage-birds, a life to which they take with extraordinary readiness; the smaller ones, Waxbills, Firefinches and Cordon-bleus, do not here strike one as particularly noticeable, as their small size and with most of them their rather skulking habits, render them inconspicuous except at a very short distance, but the larger (popularly known as Weavers, Bishops and Whydahs) when in full breeding plumage are among the most striking of all tropical birds; a flock of male full-coloured Bishops, either the scarlet and black crimson-crowned or the yellow and black Napoleons, is indeed a lovely sight, as they flit among the tall grass-stems, at the bases of which their woven nests are built, almost always in places where the ground is under water, or at any rate so soft and marshy that approach is impossible. Others are the Paradise Whydah flaunting their long tails as they fly, the rarer Yellow-backed Whydah, and finally the Black-faced Yellow Weavers which are certainly the commonest of all the seed-eating birds to be seen along the river.

During the heat of the day, however, these birds and nearly every living thing are dozing in the stagnant atmosphere, and it is only in the mornings and afternoons, from about four o'clock to dusk, that the bush is thoroughly awake. Some of its inhabitants we may certainly disturb at all hours; for instance, the two common Kingfishers, one a pied black and white bird, which hovers over the water like a Kestrel until it sights or thinks it sights a fish, when it closes its wings and falls like a stone into the water, throwing up a small fountain of spray, and then if successful emerging with a fish, which it carries off to a handy perch to devour, the other blue and black with a powerful red bill, which dives after its prey from some branch in the orthodox kingfisher manner; the same applies also to the Darters, which all day are constantly flying out ahead of the boat, and then diving to come up farther on and swim away with nothing but their heads and necks visible above water.

Towards evening life returns, and the silence begins to be broken by the voices of bird and beast. On every side is heard the monotonous "coo-coo" of the doves, and the longer call, "too-too; tütta-tütta" of the Black Pigeons; the Bushfowl begin to summon each other from the thick grass-clumps to their feeding-grounds in the cornfields. Other notes are the fluty whistle of the "ndoio," one of the Shrikes, which on occasion can also give utterance to a sweet thrush-like song, the noisy chatter of the Babblers, birds which seem to be always squabbling, the "chirk-chirk" of the Vermilion-breasted Barbary Shrike flitting from bush to bush, the screams of passing flocks of Parrakeets, the continual chirping and low whistles of Waxbills and Grass-Warblers, and lastly the shrill chatter of the countless Yellow Weavers, whose grass-woven nests fill every thorn-bush which overhangs the water sufficiently to make it a safe nesting-place. Occasionally a clear "cuckoo-cuckoo" will call up thoughts of an English summer; the owner of the throat whence comes the familiar cry may well be our wandering English friend, as he must at least pass this part of the world on migration, but there is also found here another Cuckoo whose note is identical with that of the European species.

Harsher sounds are the loud "gnar-r-gnar-r" of the Crowned Cranes and the twanging "kang-unga" of Black Ibis as parties of them fly over from the swamps or mud-flats where they feed. In the evening too the Swallows hawk much more actively up and down the river, sharing the abundant feast with red and blue Bee-eaters, while gorgeous, but heavily built Rollers are conspicuous here and there along the bank, sitting on the outlying branches of the trees, whence they at frequent intervals pounce down on to any grasshopper, locust or other large insect which they may espy. In places where the long grass comes right down to the water's edge, parties of the little green and buff dwarf Bee-eaters are sure to be seen clinging to the tall grass stems, or flitting backwards and forwards along the river margin in much the same way the Sand-Martins do at home; among this same long grass they will a little later on settle down for the night, but not till they have previously spent some little time in bickering for the perches most in demand. Coucals, the black, brown and fawn Lark-heeled Cuckoos, hop heavily among the branches, singly or in pairs, an occasional brilliant splash of cobalt and carmine against the glossy green of some dense palm-thicket marks the passing of a jungle-loving Touraco, while noisy flocks of Glossy Starlings wheel about in screaming companies like ours at home before dropping down to their sleeping places; then later on as the light rapidly fails out come Nightjars, among which may be seen one or two of the extraordinary Standard-winged Nightjars, which as they fly along with their two elongated racket-ended wing feathers fluttering behind, look for all the world like some Owl being mobbed by a couple of Sparrows; a belated Curlew or line of Egrets may pass, and later still a flock of Duck or Spur-wing Geese may be seen streaming across the face of the rising moon.

Long before this, however, bird-life has given place to the insect-host, the merciless tyrants of the tropic night; on every side they swarm, fireflies floating lightly amid the foliage like lost and wandering starlets, thousands of flying beetles, bronze or black or metallic green, some as small as ladybirds, others a hundred times as big, ugly as sin and as noisy as an underground train, earwigs, crickets, and foul squashy things which look like winged caterpillars, while a ceaseless accompaniment of shrill "music"—the prototype, one feels sure, of the feeble native zithers or their other stringed instruments—is provided by the restful sleep-inducing "susurrus" or the cicadas, and by the very opposite of this, the maddening, rest-dispelling hum of the mosquito-hosts. The night indeed is no time for bird or any other study; it takes one, then, all one's time to exist, and under a stuffy net in a still stuffier cabin to grapple with larger beasts, which have somehow got inside, and then to try to avoid listening to the constant buzzing of the culex and anopheles, to take no notice of the ferocious attacks of the pulex and perhaps even more noisome crawlers and get some attempt at sleep.

Editorial.

AN INTERESTING HYBRID:—In a letter received a month or two ago from Mrs. Dutton (of Stone) there is the following passage:—"One of these "old pets is an elderly hen Seed-eater which surprised "us all by laying in April four fertile eggs, (she had "paired with a cock Siskin). They were put under a "Canary, but unfortunately she turned sick and re- "fused to finish feeding the young ones at 16 days. "One only, a cock, was successfully reared, and he is "a queer looking customer. The second clutch (of "four) contained two full eggs. They were left with "the mother, and although she proved an excellent "feeder she was not successful in rearing them."

Of course there is nothing very surprising in this cross, because the Siskin-Canary hybrid is obtainable quite easily, and the Seed-eater was presumably either the St. Helena, the Sulphur, or even the *S. icterus*, all of which, as is well known, are near relations to the Canary. But it is none the less interesting, because I believe this is the first recorded instance of the occurrence.

IS EGG-FOOD NEEDFUL?—I have recently come across a letter received by me some time ago from a gentleman who has recently returned from abroad, Mr. C. W. Woodhouse, a student at the Royal Veterinary College, and a late member of our Council. In it he says—"I had a pair of *Liothrix luteus*, with- "held all egg food, and they came into splendid "plumage and lost the diarrhœa they had when pur- "chased—became in fact much healthier."

How much more cogent are these facts than the mere dogma that no food can be called a good food which does not contain egg, uttered with wearisome regularity by those whose "howlers" in anatomy, physiology, and pathology have now become a bye word! and who with all the lessons and hints of the past cannot even yet refrain from utterly ridiculous ineptitudes!

I have on at least one occasion mentioned that the use of egg is fraught with a danger quite unconnected with its influence, as already detailed, on septic bacteria. When I find leisure for the promised paper on the Comparative Value of Food Stuffs this will be fully gone into, and it will be seen that Prof. Woods Hutchinson (of Comparative Pathology fame) has thrown considerable light on this question of ours by means of his recent observations on the functions of the liver.

In the meantime let me point out that during the past few years quite a number of intelligent people—medical and veterinary men, prominent aviculturists, and successful exhibitors alike—have decisively demonstrated that their birds do better without than with egg. Their "experience," *being two-sided*, seems to be better than that *one-sided* kind which we are told "is good enough for most men." Facts are stubborn things, and those who try to oppose them do but kick against the pricks.

W. Geo. Creswell.

Reviews.

The Birds of the British Islands. By Chas. Stonham, C.M.G., F.R.C.S., F.Z.S., with Illustrations by L. M. Medland. Parts II. and III. Roy. Quarto, 7/6 *each. Grant Richards.*

When we spoke of the plates in Part I. as being an astonishing revelation of what a black and white production *could* be in the way of fidelity of portraiture, we were certainly unprepared to find that even they could be surpassed in the way which is now disclosed by those in these two further Parts. It is indeed difficult to find words sufficiently expressive of our admiration of these wonderful presentments without laying ourselves open to a charge of extravagance, and it is even more difficult to find one figure in the range covered in these two parts—from the Whitethroat to the Tree Creeper—which can be singled out as better than its fellows. Still if we should venture to express any preference, this might be accorded to those of the Water Ousel, the Wren, the Gold-crest and the Whitethroat, the latter of which is represented in the act of singing, with life and loveliness in every line. And special praise might also be given to the plates devoted to such subjects as the foot of the Nuthatch and the tail of the Creeper, characterized as they are, and as indeed all the figures are, by a minute accuracy combined with an exquisite gracefulness not always seen in this class of work.

The text is equally accurate in detail, and the Author shows himself to be as scientific in the domains of Ornithology as he is known to be in others. A true lover of birds, he not only knows their literature but also knows themselves.

The Bird World Magazine: December 1906. Quarto, 3d. F. Carl.

This is the opening number of an attractive monthly which should live long and prosper mightily. Its aims appear to be catholic enough to embrace all sections of bird keeping and bird keepers, not forgetting even the large army of those who confine their interest in birds to the observation of them in their wild state. Lady Catherine Milnes-Gaskell and Mr. Norman each contribute a charming article on birds at large. Miss Hinton details her nine years' experiences of Canary breeding from the standpoint of an amateur. There is a paper on Out-door Aviaries by the Editor of *Bird Notes*, illustrated with photographic reproductions of selected aviaries; and we find an interesting sketch of the Hornbills by Mr. Frank Finn, with a series of six species photographed by Mr. Berridge. Our juvenile friends are catered for by Miss Rutt; Miss Dyddgu Hamilton tells some amusing stories of her Cockatoo; and Lady Helen Forbes gives pleasant reminiscences of birds she has kept.

The number is profusely illustrated, the frontispiece being a beautiful plate in colours of a nesting pair of Bullfinches by Mr. Norman. Miss Austen's recently exhibited picture "Baited with the Rabble's Curse" is reproduced in black and white, and is accompanied by a short article on its leading figure, the Eagle Owl. There is also a delightfully realistic picture of the Buff Laughing Kingfisher, in connection with which, by the way, this species is oddly enough spoken of as a "breed," just as though it were a variety of Canary or sheep-dog. Mr. G. Rankin gives us one of the most artistic plates of Blue Tits and Coal Tits we have ever seen, and also another full page illustration of the Golden Eagle, which though exceedingly good is perhaps a little too hard in treatment to compare favourably with the other. Amongst the rest of the illustrations is one of Mr. Howe's Thrush by Miss L. M. Medland, which we regret to say is a long way from doing justice to this artist's abilities and conception of a bird, and exhibits little of the "life and loveliness in every line" which we have elsewhere spoken of in connection with her work.

The Magazine is well printed on good paper, and with the one exception of what is obviously a misprint of "breed" for "bird" generally gives evidence of great care having been expended on its production. There is however one little point. When it has attained the dignity of being a bound volume, its value would be greatly enhanced in a book lover's eye if there were no advertisements mixed up with the text. It is not so great a sinner in this respect as some magazines, but still in our opinion all trade announcements might with advantage be strictly confined to supplementary pages.

If it were not that Mr. Carl has already given us a taste of his quality in the phenomenal success he has attained with *Cage Birds*, we should wish him every good fortune with his new venture. To do so however under the circumstances would be a banality.

Post Mortem Reports.

(*Vide Rules*).

LINNET. (Mr. Aronstein). Acute pneumonia of one lung was the cause of death. The few grains of inga seed he had at the beginning of his illness would do him no special harm, but all the same he seems to have had too great a proportion of rich oily seeds all along. Birds in cages cannot stand these as well as those at liberty or even those in large aviaries. Treatment in pneumonia is useless.

BLACKCAP. (Mrs. Vernon). Apoplexy was the cause of death.

FOREIGN FINCH. (Miss Baker). Owing to the limited leisure that I had at the time I was unable to identify this bird. It died of fatty degeneration of the liver. The feeding seems to have been correct. W. GEO. CRESWELL.

Correspondence.

THE ECLECTUS PARROT.

SIR,—I have just received from my brother, who returned from Australia last week, some Parrots he wishes me to take care of, and I shall feel much obliged if you will tell me how to treat them. Two of them he tells me are cock and hen. One is entirely green with flight feathers partly crimson, also the under part of the wings and the sides of the body; tail short; upper mandible orange, the under one black. The other bird is crimson (shot with purple on the wing) and with a black beak. On the voyage they were fed on porridge, dry maize, and a bit of fruit (either tinned or fresh). When I got them I found they left all the dry maize, but they will eat it if soaked over night in water. They also have Spratt's parrot mixture and apple and banana. My brother was told not to give them any water.

The third bird is a very tiny white Cockatoo about the size of a Dove. The inner webs of its flight feathers are a very pale sulphur, and I fancy some of the crest feathers may turn out pale sulphur, but at present it is too soiled for one to be certain about this. It is exceedingly tame and continually cries out to be fondled and nursed—evidently a hand-reared bird. When it first came it would eat nothing but hemp seed and a little porridge, but lately it has eaten some of the soaked maize. It likes grapes, apple, and banana. It tries hard to get out when it sees water, but I have been afraid, as my brother was told on no account to let it touch water for two months after its arrival in this country. F. A. GOOD.

[The following reply was sent to Mrs. Good.—ED.]

The pair of Parrots are a male and female Eclectus, the green one is the male and the purple one the female.

You are feeding correctly.

The small Cockatoo is probably from Timor Laut. You can give it the hemp and soaked maize; perhaps in time it will take other seeds, but do not attempt to starve it to any particular diet.

With regard to water, it is quite a mistake to deprive these poor birds of drink; at the same time, when they have been without it for any length of time, great care must be taken not to give too much.

A teaspoonful or so about twice a day would be sufficient to begin with, and the quantity be very gradually increased until they have quite got over their thirst and are able to look at and bathe in water without wanting to swallow it all.

W. T. GREENE.

CHAFFINCHES AT THE WINDOW.

SIR,—Under the above heading an account was given on page 264 of Vol. IV. of *Bird Notes* of two cock Chaffinches seeking shelter at a window from a gale in the previous November (1905). Curious to relate a like incident has occurred in the November of this year and at the same hour of the evening, between six and seven o'clock, and at the close of a wild blustering day, the wind being at the time still very high. A sound of tapping on the glass together with a fluttering of wings was heard, and on opening the window a cock Chaffinch immediately flew into the room and was soon caught, dazzled by the light and no doubt exhausted from battling against the storm.

Shortly afterwards similar sounds attracted our attention outside the same window, and on its being opened, we were partly prepared, recollecting last year's incident, and so were not altogether surprised to see a second cock Chaffinch take refuge from the gale.

The birds were in very good condition, and after a night's lodging flew happily away. One hopes they may again come for admittance another year. N. M. E. WARD.

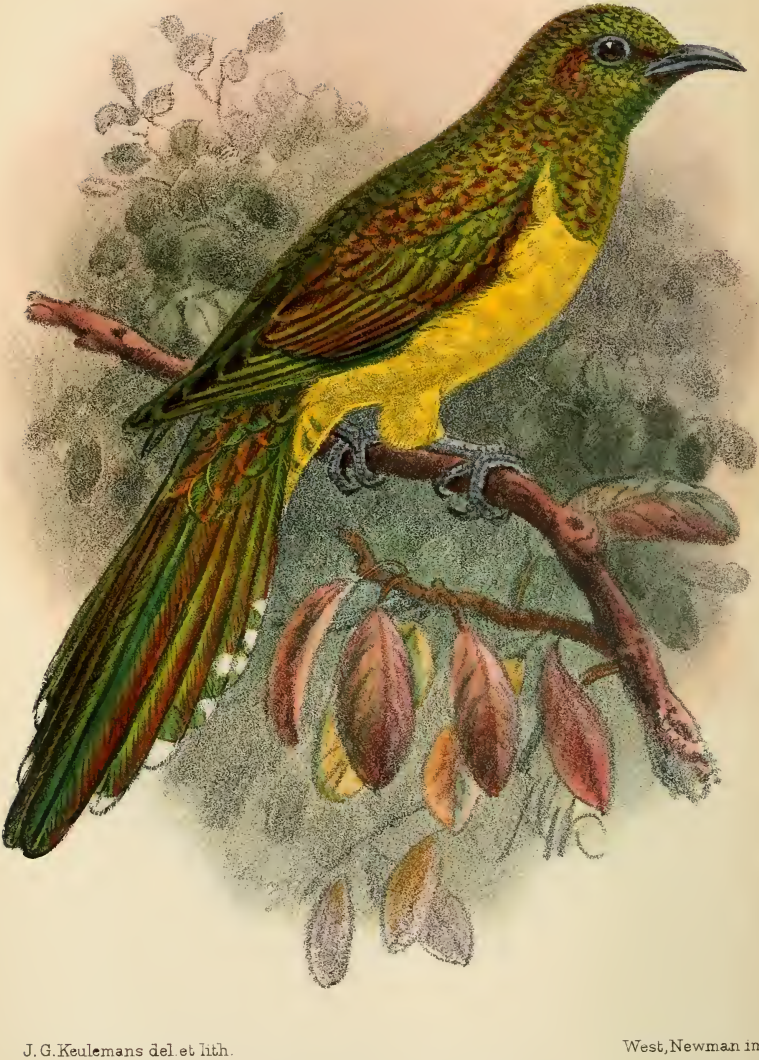
HOW TO FEED BLACKCAPS AND NONPAREILS.

SIR,—Please let me know how to feed a Blackcap and Pin-tailed Nonpareils. Also is the Yellow-billed Cardinal (*Paroaria capitata*) at all uncommon, and can one distinguish the sexes. I got one for a few shillings the other day, and the man did not even know what it was. E. WARREN VERNON.

The Blackcap is extremely easy to keep either in cage or outdoor aviary. The best food for it is a mixture in equal parts of dried flies, ant cocoons, and crushed unsweetened biscuit, given dry. In addition it should have mealworms, (some individuals, but not many, won't eat these), live insects, and fruit, (banana, grapes, &c.) Bacozzi, the dried pupæ of silkworms, may also be given; some of these birds are very fond of it. In Italy it is largely used.

The Pin-tailed Nonpareil will eat millet, canary seed, oats, &c., and should also be allowed free access to the same food as the Blackcap's.

The Yellow-billed Cardinal was for some time almost unknown to the average bird buyer, but lately it has been a little more freely imported, and therefore not so very expensive. In the Brit. Mus. Cat. there is no difference noted between the male and female plumage. W. GEO. CRESWELL.



J. G. Keulemans del. et lith.

West, Newman imp

BRONZE CUCKOO.
Chrysococcyx smaragdineus.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Bronze Cuckoo.

(*Chrysococcyx smaragdineus*).

By J. G. KEULEMANS.

This elegant bird is a native of Western Africa and probably also of the central part of that continent, and it has been found in the mountain regions some 400 miles east of Libreville (Gaboon). It is common in Prince's Island, also in San Thomé and Annobon Islands.

A curious fact is that these birds are migratory in both Prince's Island and San Thomé, their usual habitat being on the high mountains of the Western or oceanic side of these islands from February until November, after which they leave for the Eastern regions, where they visit the plantations and lower parts near the town of each island. I have often seen them perch on the roofs of the houses for a short while and then fly off to some isolated tree, from the upper twigs of which they would utter their clear and bell-like note a dozen times in succession, after which they would hurriedly fly off to another tree a short distance away to repeat their musical performance once more.

The note is entirely different from that of our common Cuckoo, being more like the far-sounding call of the American Bell-bird, though not so varied.

It sounds like "tzaafivie-tzoowie," and this oft repeated note can be heard throughout the day fully half a mile off.

This Cuckoo is very shy, a quick flier, and a very restless bird. It does not mind the heavy rains which fall almost daily in these islands. In fact it is during a rain-fall that it can be best observed. Most of those which I shot or captured were obtained during a heavy shower. Strange to relate their beautiful plumage is never affected by the rain, the water always dropping off them as it does from a duck.

The female lays her egg in the nest of some smaller bird that builds an open nest. The little *Zosterops ficedulina* and the allied but larger species *Parinia leucophæa* are the usual foster parents of this Cuckoo. A remarkable case of cuckoo rearing was witnessed by me in July 1863 on the plantation I then occupied. Behind my small dwelling house grew a large Acacia tree, the branches of which nearly touched the balcony. A pair of *Parinias* had built their nest so near the verandah that I could hear the young ones while they were being fed. One morning the pleasant sound of this young family calling for food had suddenly ceased. A week later I noticed a young Cuckoo lifting its head above the nest. Stranger still, two or three days later a second young Cuckoo was to be seen in the same nest, and both these intruders were fed, not only by their original foster parents but also by at least a dozen other small birds. It was only owing to the fact that the winged-ants were flying in swarms at that time that the numerous volunteer foster-mothers were enabled to accomplish their heavy task. Unfortunately the nest fell into pieces after some days. Probably the weight of the two parasites had broken it down, or it may be that the two young cuckoos had fallen overboard owing to want of comfortable room inside the nest, or again this may have been spoiled by my servant when trying to remove it from the tree.

The native name for this bird in both islands is "Lobo"; in the Gaboon it is called "Brotiotocolle."

It feeds on berries as well as on insects, and with insect food given to it in large quantities it will live in confinement for a long period, but never becomes tame. The one whose portrait, originally drawn in 1866, accompanies these notes, was caught by myself in Prince's island and remained alive for two years.

Strange Attachments of Birds.

By the late W. T. Greene, M.A., M.D., F.Z.S.

Birds form very curious attachments sometimes, not only among themselves, but also for animals and even for mankind.

I once saw a Leadbeater's Cockatoo and a Blue Mountain Lory that were devotedly attached to each other despite the difference of species and the disparity in size. They had been caged together for some time, and the smaller bird usually slept under the right wing of the larger one, which was folded over it, and which after a time stuck out as if the bone had grown stiff from constantly overlapping the Lory.

A lady with whom I was acquainted had in her possession for some time a couple of Lovebirds, both hens, one of which was a Redface and the other a Madagascar. They always sat side by side and used to feed each other just as a regular pair would have done. Someone having presented the lady with a male Redface she thought her two hens would be delighted to welcome him to their society and accordingly put him into their cage, but to her surprise, the hens fell upon him beak and claw, and would certainly have killed the poor little fellow if she had not intervened and taken him away. After the removal of the male, the hens talked a good deal to each other, went down to the seed box, and had a feed, always side by side, exactly (as their mistress observed) like two nice old ladies having a cup of tea together, and discussing the latest parochial news.

A friend of mine had a pair of white or Albino Jackdaws which he was very anxious should breed, as he was interested to know whether the young would resemble their parents or be like the ordinary members of their race, but unfortunately for his plans, the female fell violently in love with himself, would call to him and follow him about everywhere when he went into the aviary, which was an unusually large one. In vain he attempted to drive her away and convince her of the folly of her conduct. She absolutely rejected all the advances of her mate and laid a lot of eggs which of course came to nothing.

Someone else I knew had an exceedingly tame hen Californian Quail, which also became enamoured of her master, and would hail his appearance in the garden with every demonstration of delight, running up and down inside the enclosure as he walked along the path outside. When he ventured into the aviary he had to exercise the greatest care to avoid stepping on her, as she would continually run round and over his feet, making the peculiar little call note by which the hen quails attract the mate. That summer she laid 72 eggs, not in a nest, but just dropping them about anywhere; they were all unfertile, and this annoyed the owner so much that he parted with the prolific little creature, whose affection it is to be feared was as little appreciated as it was remarkable and somewhat absurd.

The Bullfinch is a very affectionate bird as a rule, and as might be expected many instances of its attachment to human beings are on record. A lady who owned a beautiful piping Bullfinch had to leave her home for a week, during which time the bird pined visibly, and called incessantly for his absent mistress, upon whose shoulder he was accustomed to sit for hours at a time while she read or sewed. He ate but little, and the person who had charge of him was afraid he would hardly live till the lady returned, but he did, and when he saw her, in spite of his weakness he fluttered about his cage in a state of great excitement, and when she opened the door he instantly darted out upon her breast, spread out his wings, and died.

Many similar instances might be related, but let these suffice to prove the assertion that birds do form strange attachments.

The African Black Hornbill.

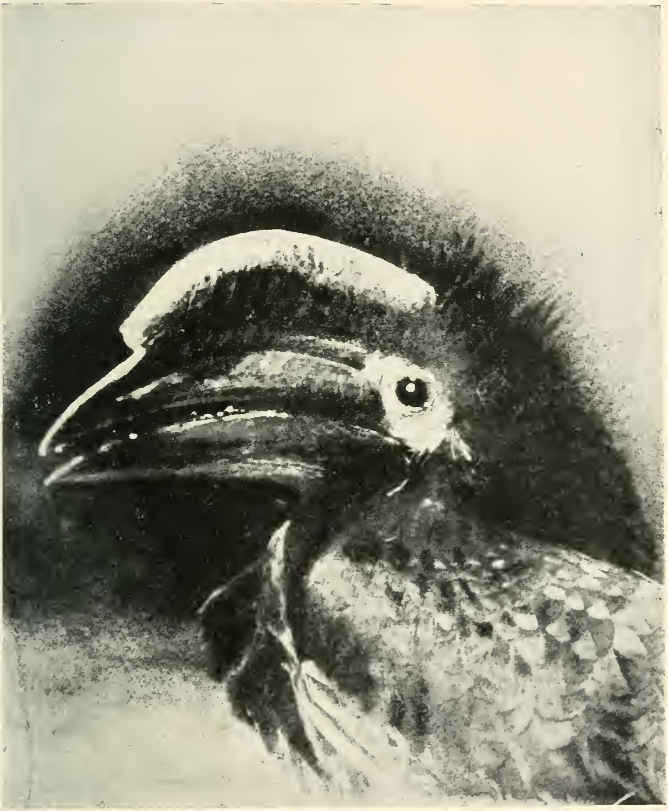
(*Sphagolobus atratus*).

By C. Castle-Sloane, F.Z.S.

With regard to the plumage of this bird:—it is all black with a greeny sheen all over it in the sunlight, the tips of the tail feathers are white, there is a mauvey blue skin round the eye, and the eyelashes are very long.

My specimen had been in the Zoological Gardens for the previous five months or so, where no doubt some of my readers may have seen it. Whilst there it must have been petted all day, and fed by hand, judging from the cries with which it meets one when entering the aviary; it has two distinct cries, one for when it wants something especially dainty in the shape of grapes or banana, and the other for merely personal notice.

I shall not forget when I first fed my bird with an apple, which I broke in pieces and gave in a dish. I should think it took but a second to demolish it, and then finished another one in like fashion, as soon as I had got it ready. I thought to myself "how on earth am I to provide sufficient bananas, grapes, and apples for you," and I felt he would truly be my bird with the big bill, so I mixed up dried flies, ants' eggs, and biscuit with a little potato, in the hope of weaning it from its expensive tastes, and was very glad to find it took to the little cannon balls of mixture I made for it. When it gets weary itself of tossing great lumps down its throat, it opens its great bill for you to continue the operation, uttering at the same time short little croaks. This bird never wearies of being petted. It is quite content so long as one is talking to it, stroking it, or playing about with it, and it will throw



AFRICAN BLACK HORNBILL.

(Sphagolobus atratus.)

To face page 250.

its great head back nearly to its tail for one to stroke its throat. It is certainly a most weird bird with its long broad bill, and I think it must be the ugliest bird one could wish to see. Except for its soft beautiful eyes, which almost speak, it has not one redeeming point.

In "Wonders of the Bird World," (Dr. Bowdler Sharpe) is the following description of the nesting of the Hornbills:—

"Here we find the female resorting to the hole of a tree and laying her eggs, one or two in number, while the male plasters the hole up and takes upon his shoulders the support of his wife and child. Anything more fraught with disastrous consequences to the family can scarcely be imagined, for if the poor hard-working husband is shot or otherwise killed the imprisoned wife and baby run considerable risks of starvation. There would seem, however, to be a spirit of co-operation among Hornbills, for even if the female cannot free herself from the hole in which she is confined, as the natives assert she can do on occasion, she may be sure of the assistance of her relations. Thus Mr. John Whitehead relates ('Ibis,' 1890, p. 17,) that he once found a nest of a Hornbill in Northern Borneo, wherein the old hen bird and her youngster were imprisoned in an old tree, the entrance to the hole being secured by a plaster of gums and resins. He found no less than five other Hornbills feeding her, both males and females being engaged in the task. These were doubtless birds which had brought up their own young one, and were free to attend to some one else's needs. Before he discovered the nest Mr. Whitehead shot three of the birds, but the next day he again found a pair of Hornbills bringing food to the imprisoned female. The latter on being taken out of the tree, was so weak that she was unable to use her wings for a long time, and it may be a wise provision of nature that the hen bird should be imprisoned in this curious manner, for it seems from specimens of the Pied Hornbill (*Lophoceros melanoleucus*) which we have in the British Museum from South Africa, that the female undergoes a complete moult when she is in the tree, and thus, if the nidification were otherwise effected, the bird would be at the time powerless for flight, and unable to defend herself. It appears also that her imprisonment is quite voluntary, as the female assists the male in the work of plastering up the entrance to the cavity in the tree in which she seeks refuge, and that the walling up of the wife at this defenceless time of her life, is to guard her against the attacks of the insidious foes which, in the shape of skunks or lizards, would intrude upon her retirement. In Borneo, as my friend Mr. Hose tells us, a Parodoxure (*Hemigale*) is a dangerous enemy, and Monitors and Tree-lizards also attack the home of the Hornbill, but the female bird is generally equal to the occasion, and her sharp bill is a sufficiently formidable weapon of defence."

With regard to the conveyance of food by the male to the female, we get the following from the "Dictionary of Birds," Professor Newton.

"This remarkable habit, almost simultaneously noticed by Dr. Mason in Burma, Tickell in India, and Livingstone in Africa, but since confirmed by other observers, especially by Mr. Wallace in the Malay Archipeligo, has been connected by Mr. Bartlett (Proc.

Zool. Soc. 1869, p. 142) with a peculiarity as remarkable, which he was the first to notice. This is the fact that Hornbills at intervals of time, whether periodical or irregular is not yet known, cast the epithelial layer of their gizzard, that layer being formed by a secretion derived from the glands of the proventriculus or some other upper part of the alimentary canal. The epithelium is ejected in the form of a sack or bag, the mouth of which is closely folded, and is filled with the fruit that the bird has been eating. The announcement of a circumstance so extraordinary naturally caused some hesitation in its acceptance, but the essential truth of Bartlett's observations has been abundantly confirmed by Professor Flower (tom. cit. p. 150), and especially by Dr. Murie (op. cit. 1874, p. 420), and what seems now to be most wanted is to know whether these castings are really intended to form the hen bird's food during her confinement." On referring to Mr. Bartlett's remarks (Proc. Zool. Soc., p. 142, 1869): "A few weeks after the Wrinkled Hornbill (*Buceros corrugatus*) was received in the Society's Gardens, the keeper called my attention to a queer-looking fig-like substance he had picked up in the aviary. Struck with its appearance, I took it home and endeavoured to examine it carefully, and opened its closely folded mouth. I found this fig-like bag contained plums or grapes well packed together, the wrapper or envelope looking much like the inner lining of a gizzard, somewhat tough, elastic, and gelatinous. Almost alarmed for the safety of the bird that had thrown it up, and at the same time having some doubt as to its real nature, I at once sought the assistance of our Prosector Dr. Murie, handing him the specimen and telling him its history."

Dr. Murie's report was as follows: "On examination of the specimen I found, as was at first suggested in joke, that the bag did absolutely consist of nothing else than the thickened semichondrified lining membrane of the gizzard. All the puckerings and indentations were more or less exactly represented, though less sharp in outline than is ordinarily the case. The mucous surface of the inner wall of the bag was slimy, otherwise perfectly identical with the same structure in a healthy bird. The surface outside, on that which might be said to be the submucous tissue, was moist, comparatively uninjured, and free from any effusion or disease. The rim of the mouth of the bag was irregular and shreddy, and thinned away at its free edge. The soft egg-like bodies contained within this (so to speak) cast up sac proved to be seven or eight discoloured grapes; or they might be, so far as appearance went, raisins. None of these had undergone the process of digestion, but, from their sodden aspect, I believe had been slightly acted on by the gastric juice. Positive of the nature of this queer rejected pellet, there follows the still more extraordinary circumstance that the Hornbill should live and feed afterwards, seemingly not much affected by the loss of the inner coat of its stomach. Had I not seen and examined the objects I would scarcely have credited the facts."

Mr. Charles Hose gives the following account in "Wonders of the Bird World" of the taking of a mother Hornbill and her young one in Sarawak:—

"Our attention was first attracted to a quantity of excrement at the base of a large tree, and looking to see where it came from we discovered a hole in the tree, about fifty feet from the ground. One of my Dyak hunters at once recognised it as the nest of a Hornbill, and proceeded to climb the tree, but was obliged to come down before reaching the nest, as the tree had no low branches to help him. He soon, however, overcame the difficulty in a manner creditable to his ingenuity. Having cut a number of pins or pegs of very hard wood, he drove them into the tree at intervals of about three feet, each pin being about an inch in diameter and nine inches long. After the first few pins had been driven in, a straight pole was cut about thirty feet long, and one end was driven firmly into the ground in a perpendicular position, at the foot of the tree. The head of each pin was then securely tied to this pole, which made a simple and effective ladder. The Dyak who climbed up told us that the nest contained the mother and one young one. These two birds were walled in with a resinous substance, leaving only a small hole through which the male bird fed them, and the diameter of the hole would be about two inches. This gum-like substance is formed, as I afterwards found, in the body of the bird, and deposited by it round the entrance to the nest, where it hardens, and becomes a protection against the many enemies of these birds. When the young bird is old enough to fly the parents break down this wall, and the hen and her youngster leave the nest. Wishing to observe the habits of these interesting Hornbills I would not allow the men to take the birds, or to interfere with the nest; and on coming to the tree some days afterwards, I watched the male bird feeding his family. He settled on a convenient knob of the tree just below the nest, and the hen bird put her beak through the hole and received four or five pellets about the size of a small hen's egg, but longer. These pellets, I afterwards discovered, were enveloped in a sort of elastic skin, and contained chopped-up leaves and small shoots, mixed with fruits and various seeds. When the young bird was ready for us to take, we went to open the hole, and one of the men having gone on before, shot the male bird and proceeded to climb the ladder and break away the wall at the entrance to the nest. The tree, however, was hollow, and the hen bird fluttered upward out of his reach. Finding he could not catch her, he left the young one in the nest to prevent the mother from leaving, as he had made the hole by this time quite large enough for her to escape; he then came down, and we returned to the hut to devise a plan for securing the old bird. The Dyak, who had done this work before, soon made a kind of basket by splitting up the end of a bamboo for about a foot in several strips, and then tying a ring inside to keep them open in a cup-shape. We then returned to the tree, and to our surprise found several more Hornbills, some feeding the birds in the hole, and others flying round, and constantly settling near the spot. The Dyak then went up the tree by his ladder and quickly captured the hen bird in his ingenious basket, without injuring her; and we brought her home with her young one, which made an extraordinary monotonous noise, and appeared to be continually hungry, though seeming to be well fed. The nestling afterwards became quite tame, and lived for months, flying about my garden, sometimes taking possession of the back of a chair whilst I was at meals, when he would catch pieces of bread thrown to him." In his interesting work (i. p. 213) Mr. Wallace describes a nestling as follows: "A most curious object, as large as a pigeon, but without a particle of plumage on any part of it. It was exceedingly plump and soft, and with a semi-transparent skin, so that it looked more like a bag of jelly with head and feet stuck on than like a real bird."

The Quail Finch.

(*Ortygospiza polyzona*).

By R. Suggitt.

A few of these queer little finches were offered for sale on the bird market during the summer of 1905, and, late in August, I became the fortunate possessor of a very dilapidated male specimen. He was dirty, in bad feather, and not in the best of health. The latter however, by careful treatment, rapidly improved.

My bird is no larger, but more stoutly built than an Avadavat. The general colour is a dull brown, greyer on the underparts, and barred with white on the sides of the breast and flanks. The centre of his breast is bright chestnut; the face and throat, sooty black; the outer tail feathers edged with creamy white; beak, red; feet, flesh colour. He has a quaint little song, resembling the whine and bark of a miniature dog.

The cage in which I placed him upon arrival, was fitted up with the usual perches, but they were altogether unnecessary, for he remained at the bottom of the cage all day, and slept there at night, preferring to sit on a millet spray. He never went on a perch voluntarily, and when he was startled and accidentally alighted on one he seemed awkward and ill at ease.

The hot dry weather in mid-September tempted me to let him go into the open air for a few days, and in the aviary his behaviour was just the same as when he was caged. He appeared to thoroughly enjoy himself, and delighted to run among the coarse grass all day long, uttering a series of little shrill barks and whines: a song of which he seems to be very proud. He never rose into the air except upon a sudden alarm, when he would fly straight up for two or three feet, and then immediately return to the grass.

When he had been out a week I discovered that at night he did not even seek the shelter of the long grass, but slept in the open on a slight rise in the ground. Fearing that in his sparsely-feathered condition a heavy fall of rain might, even during the hot weather, prove injurious, I caught and re-caged him. His capture was an easy matter, owing to his weak flight and his strict avoidance of all bushes and trees.

A glimpse of his chestnut breast is seldom to be obtained, as it seems to be his constant care to keep it out of sight. Even when he runs along his body almost touches the floor, and when he sees anything unusual he erects his tail into an almost perpendicular position, and presses his breast to the ground. He is rather wild in the cage and knocks himself about considerably.

His favourite food is millet in the spray, but he will eat white millet and a little canary seed: the spiders, mealworms, and insects which I have from time to time placed at his disposal have, so far as I can see, remained untouched. Although a bath is always accessible my bird evidently despises the luxury, for he has never willingly wet one of his feathers since he has been in my possession.

The Quail Finch seems to be fairly hardy, but to winter in the open air a bird which habitually sleeps on the ground would be very unwise, unless of course one wished to try an experiment—which in case of failure would be rather costly.

Concerning Rooks—both Wild and Tame.

By W. Geo. Creswell, M.D.

These birds do not appear to be generally regarded as possible pets, the reason being probably to be found in the difficulty of abstracting the fledglings from their inaccessible nests, and in the conservatism which leads us to think of the young Rook as only existing to be shot—sitting, be it borne in mind—for the pie dish. But when by happy chance a Rook does become a member of some human family, he is found to possess in a very high degree all those traits of Corvine character, which from time immemorial have made his congeners such amusing and intelligent companions.

I do not remember ever having actually owned a Rook myself, unless one may have figured in the long forgotten kaleidoscope of half a century ago, when birds came and birds went—in the various directions peculiar to the ideas and ways of early youth. Yet it has fallen to my lot in later days to be the temporary guardian of one of these friendly Crows. It thus fell out. One July morning (1900) the wife of a medical friend, accompanied by her two little daughters carrying a mysterious looking basket, informed me that they were just off for a month's holiday, and asked me to relieve their anxieties by taking charge of a young bird, which on the 5th of the preceding month they had found fully feathered but with an injured wing (shot?) in their garden, which lay under the shadow of the woodland region of Villiers Path, the scene of the historic opening skirmish of the Civil War. He had grown up in the bosom of this truly animal-loving family, his wing power was restored, and at the time I mention, he had complete liberty both in and out of the house, flying where he listed, but ever regarding the dining room as his headquarters.

Naturally such a bird as this could not be left to the tender mercies of servants—who notoriously feed or don't feed, who shut in or shut out, who in fact apparently do anything or do nothing where animals are concerned without the slightest intent either one way or another—and so hot foot on the word the little ladies opened their basket and released their precious possession. With great gravity he hopped on to the edge of his temporary prison, said a corvine word or two of which the purport was not to me revealed, and then allowed himself to be passed to and fro between his young mistresses to receive from one and the other the most extravagant display of kisses and cuddlings I have ever seen bestowed on anything beyond a pampered tabby. And not only did he merely allow this; in a manner which I have only seen equalled by one of my Senegal parrots he returned their caresses.

Lest trouble might ensue on his transference to fresh quarters I straightway clipped the primaries of one wing, and then turned him loose in my garden. But if I thought I was going to receive any marks of affection or even of tolerance from this good tempered animal I was speedily undeceived, for the whole time he was my lodger he never allowed me to get within twenty yards of him. Neither hunger on his side nor the wariest stalking on mine ever lessened the distance his suspicion had fixed as the proper one between us. The nearest approach to familiarity he ever evinced on my premises was to take food off the ground within perhaps a yard of the good lady who at that time "did for" me and my bachelor establishment. Not that he had lost any of the humour which had previously marked him in his old home. It is true that I had no dogs and no cat for him to persecute by pecking them when asleep, or by tweaking their tails to drive them from the food dish, but the place of the quondam victims was speedily taken by my unfortunate pigeons, of which at that time I kept a considerable number. These birds had free egress from their aviaries and used to spend a good deal of their time in the garden. After their morning bath they would lie on the grass, basking in the sun, and on these occasions Master Rook always considered them to be fair game for his practical jokes. And right well did he exercise his presumed right, till at last their slow moving brains grasped the conviction that he was a person to be avoided. When a flock of them had got comfortably settled down to dry, it was really amusing to see him sidle around so as not to excite their alarm and gradually reduce the distance till he could suddenly pounce upon some unlucky wight to give him a vicious dig in the back. The sudden onslaught of course had the effect of immediately driving them all up, when he would give vent to a series of caws in which it was quite easy to detect the note of banter and self satisfaction. His next move was always an attempt to upset their bath. This was an enamelled dish about 18 inches long, and although by this time a good deal of the water had been splashed overboard, the undertaking was naturally in the way of considerably overtaxing his powers. Still, with the pertinacity which is an attribute of most birds when once their narrow intellect has settled on an object, he would persevere in his efforts, sometimes for nearly an hour, and when as often happened he was successful, his delight was unbounded, as evidenced by his grotesque hops and jumps and the frantic yellings of his only note.

I was very interested, soon after he came, to see him secrete those portions of food which, at the time, he did not want. Many times I watched him do this from my dining room window with the aid of a pair of glasses. Sometimes he would merely hide a fragment under the overhanging lower leaves of a geranium, and this appeared to be his favourite dodge—possibly because it was the easiest. At others he would place the piece of meat, or whatever it was, on the ground at the foot of a rose tree or grape vine, and then carefully cover it over with small stones. Once or twice I was fortunate enough to detect him going to a hiding place when hungry and making use of his savings, but as he was always kept well supplied with food both here and in his old home, I fancy that in secreting his morsels he was rather obeying the dictates of race habit than exercising any active and individual intellectual process with a view to the future.

At the time I must confess my belief was entirely opposite to this. Accustomed to seeing these birds feeding day by day in the fields by digging in the soft ground, and then wending their way in the dusk to their distant roosting place, I had, for want of better knowledge, formed the superficial opinion that their food consisted entirely of such worms, grubs, and insects as would be found in and on the ground, and that there had never been any necessity for them to form a "race habit" of laying by for times of scarcity. So when I saw my tamed Rook making his little *caches* I was surprised as well as interested, and rashly jumped to the conclusion that he was initiating the custom on his own account, and entirely uninfluenced by race habit. I had never reflected that there must be times when the field food would necessarily run short, and that there was no reason, either anatomical or physiological, why the Rook should not be as omnivorous as the rest of the Corvidæ. As a matter of fact I know now that under unusual stress it is not only omnivorous but will actually kill for food. In his beautifully illustrated edition of Gilbert White Mr. R. Kearton tells us that "during the terribly hard "weather of January and February 1895, rooks took to "preying upon their half starved starling satellites," and that since that time he had seen them trying to repeat the practice. I also believe it is well known that they are fond of walnuts and acorns, and Blackwell (Researches in Zoology, 2nd Edition, 1873) states that "in the autumn they frequently bury acorns in the "earth . . . . . ; but sometimes forgetting where "they have concealed them, they germinate and not "infrequently excite surprise by the singularity of the "situations in which they grow, far distant from any "trees by which they could have been produced, and "where it is very evident that they have not been "planted by man."

About two and a half years after noting these occurrences I had a fresh experience in connection with another Rook who did the same thing. The first one had been duly returned to his owners at the end of their month's vacation, and had unfortunately died after about a year, much to the grief of the whole family, to whom he had greatly endeared himself, no less by his affectionate disposition than by the many mischievous and humorous tricks he was constantly developing. I mention this to shew that the bird which appeared on my lawn one February day was therefore not my old acquaintance. At this particular time the weather was exceedingly cold and windy, with hard frosts every night, though it did not freeze during the day.

As is my usual custom in hard weather I had placed on the grass close to the house a small heap of scraps, which was a great attraction to Starlings and other birds, leading to many squabbles and fights. Now and then a Starling would take a large piece of bacon rind some distance away so as to secure a more uninterrupted chance of negociating it. While one of them was thus engaged in violent efforts to make a satisfactory meal from such a piece, I saw a Rook suddenly fly down, apparently from no where in particular, and drive the lesser bird away. Then, pinning the tough morsel down with his feet like a hawk, he tore it up and soon finished it. He next solemnly stalked for a few yards towards where the main body of small birds was engaged at what we may call the depôt, breaking at last into that funny ungainly run that one is so familiar with in the person of the tame Jackdaw. Having scattered the earlier guests he made a good meal, and finally took a good fragment away and hid it under the box edging of a flower border. For fully an hour afterwards he walked about the garden, and several times tried to bathe in a small flanged feeding vessel, originally designed for rabbits, about four inches across, which was in a sheltered corner and contained a little unfrozen water. He stayed on the premises exactly a week, roosting in one or other of the trees, and at last disappeared as mysteriously as he came, directly after preaching a noisy sermon to a neighbour's cat, which was at the time in the next apple tree to the one he had for the moment appropriated.

Now what was this Rook? Was he a domesticated or partially domesticated specimen? or was he a purely wild bird led by stress of weather and the presence of food to take up a temporary lodging amongst the abodes of man? His comparative tameness and the unconcerned way in which he investigated all the odd corners of the garden pointed to the former, but on the other hand he had the ugly bare patch on the front of the skull, the perfect quill feathers in tail and wing, and that general gloss and smart condition of plumage which are popularly associated with a wild bird. In this latter case it is just possible that his departure was determined by the presence of the cat. The true explanation may however be that, like another instance to be presently noticed, he was originally a tame bird with a cut wing, but had subsequently escaped after a moult and reverted to a state of freedom.

(*To be continued.*)

Editorial.

IN MEMORIAM—DR. W. T. GREENE:—Ornithologists and aviculturists all over the world have to regret the death of one who has for more than a generation so identified himself with their interests as to render his name a household word. We in particular will feel his loss, for not only was he our President, but he has also been ever ready to help both the Magazine with articles and our members with advice and assistance.

For some time past he had suffered from a progressive affection of the eyes, which at times caused him much pain, and which at last led him to give up the active practice of his profession in London, and to employ an amanuensis. But his death was not anticipated in any way, for the end came quietly and peacefully in his chair soon after coming in from a country walk on the 10th of last month.

The deceased gentleman spent much of his early life across the Channel and was a student of the University of France, coming out as Bachelor of Laws. He afterwards migrated to the University of Dublin, where after the prescribed periods of study he became Bachelor of Arts and Bachelor of Medicine, finally graduating as M.A. and M.D. in the years 1872 and 1876 respectively. After spending some time in travel, during which he visited Australia, he engaged in medical practice, occasionally finding time to write on medical subjects. It is however as a writer on ornithology and aviculture that he is best known. A keeper of birds from his very earliest years and the wielder of an exceedingly facile pen, about a score of complete books stand to his credit, not to speak of innumerable articles and other contributions in magazines and newspapers.

Among the more important works which he published are "Parrots in Captivity," "Favourite Foreign Birds," "Birds I Have Kept," two volumes of "Notes on Cage Birds," "The Amateur's Aviary," "Feathered Friends," and "British Birds for Cages." He also wrote a little book about 20 years ago on "Diseases of Cage Birds," which as I gather from a letter he sent me three or four years ago, was somewhat a source of regret to him in his later life, inasmuch as he had long since sold the copyright of it. No one realized more than its author that the efflux of time and the phenomenal upheaval of medical views, due to the extension of bacteriological knowledge, had rendered its revision, or rather its complete rewriting, a work of absolute necessity, and in the above mentioned letter he stated his intention of approaching the present proprietor on the subject. Apparently the project failed to fructify. I mention this matter thus freely because I have often had to explain to medical and veterinary men why this book still exists in a form which, however it may have accorded with the medical knowledge of a generation ago, is more or less an anachronism to-day.

Dr. Greene's literary style was particularly pleasing and fully revealed his personality. Singularly devoid of vanity, deeply endowed with the love of truth and honesty, painstaking to a degree in the acquisition and recording of facts, gifted with the greatest humaneness of feeling for all animals in his care, and ever exercising the greatest kindness and consideration towards his fellow men, he was essentially what used to be associated with the idea of "gentleman." Unfortunately I never had the advantage and pleasure of his personal acquaintance, the one or two engagements to meet having fallen through by reason of professional urgencies on one side or the other, but I can look back with pleasure to our various correspondences in past years, his first letter being dated 1885, and his last communications being received only shortly before his death, and printed in this issue. He was always ready with advice and help when I desired it, and if by chance we disagreed on any matter his attitude was invariably one which commanded respect and attention.

Aviculture has lost an able and amiable guide, and its votaries can well imagine the loss to his family, to whom I am sure I now voice the sympathy of all our members.

Much has been said from time to time in these pages anent the question of egg food, and the newer recruits to our ranks may imagine that the campaign is of recent birth. To these therefore it should be of interest to learn that, after having used this food for his birds in all his earlier days, Dr. Greene at last came to the conclusion through a vast practical experience, that not only was egg unnecessary, but that it was actually harmful in the long run and in the aggregate. He published a paper embodying his views in Vol. I. of *Poultry* about 25 years ago, but, as he has placed on record in the pages of this Magazine, the opposition he met with was so "abusive and virulent" that he allowed the resulting controversy to drop. To him, therefore, belongs the honour of being the pioneer in this reform, one which is steadily gaining adherents from day to day amongst the more intelligent ranks of bird keepers.

FILARIASIS IN A BLACKBIRD:—Readers will recall the mention in these pages from time to time of the occurrence of exceedingly minute filariæ in the blood and particularly in the lungs of foreign birds hailing from hot climates, both African and Australian. Dr. Hopkinson once told me also that these animalcules are exceedingly common in the West African birds, and the suggestion has been hazarded that after a prolonged residence in this country they disappeared.

It seems however that our own birds may be affected in this way, though to be sure the particular specimens in which they were noted belong to species of which many individuals are known to migrate as far south as North Africa. The Professor of Pathology at Queen's College, Belfast, (Royal University of Ireland), Dr. Symmers, in July last year saw a Blackbird suddenly drop dead from a tree in his garden. On examination he found that to the naked eye all the internal organs were apparently healthy, and beyond this that the heart blood contained no bacilli. But it did contain great quantities of these worm-like parasites, and as his examination was conducted soon after the bird's death, he was able to observe their movements, an interesting account of which will be found in the *British Medical Journal* for Oct. 20, 1906. As to their structure they appear to have resembled those which I have noted in newly imported Rosellas and other birds.

Commenting on Dr. Symmers' paper, Dr. A. C. Coles, a well known authority on such matters, writes in the same Journal on Nov. 3, 1906, that he has frequently found these parasites "in the blood of the blackbird and thrush at any and all times of the year," and goes on to say that he "should expect to find these embryos in the blood of one out of every third or fourth blackbird or thrush which he examined." He has also frequently found them in the starling.

Colonel Wyville Thomson has also recorded in the same Journal his having repeatedly found these organisms in the blood of the jungle crow of India (*Corvus macrorhyncus*), and both this observer and Dr. Coles have in addition found other well-known bodies (Hæmosporidia and Trypanosomes) along side them.

One would imagine that these pathologically important organisms would be comparatively common among the cosmopolitan collection of birds in the Zoological Gardens, but like the avian septicæmia characterized by the formation of cheesy nodules, and found so frequently in cage and aviary birds, (and even occasionally in wild birds), by Dr. Clarke and myself, they do not figure in the pathological Report of the Society.

THE MARCH OF SCIENCE:—A gentleman who within my own knowledge lays claim to being what he calls a "science doctor," and who appears to be so full of "science" that he has some difficulty in accepting what passes for science among mere ordinary Doctors of Science or Medicine, has lately been telling the readers of a certain paper that it does not matter whether their birds are pronounced to have died of septic enteritis or enteric fever, so long as they have died, and moreover that whether we speak of "lung diseases"—there are several of these, I may say—as consumption or not is of no moment. At first sight this would appear to mean that enquirers, (who, having taken the trouble to ask, presumably want the truth), need not be told the truth. On the other hand it may only be the subtle beginning of a policy of scientific reform, having for its object the abolition of post mortem examinations, and the consequent natural decay of pathological laboratories as being useless nests of misguided learning. If so the ulterior result should certainly be the canonization of our "science doctor" by future generations of emancipated medical and veterinary students.

There is another gratifying fact that deserves a chronicle. A remedy which has for some few years been recommended by the same scientific authority for certain symptoms, (notably the vomiting of sop by Parrots through their nostrils!), under the name of Glyco-thermoline, has lately been correctly spelled Glyco-thymoline. As I said before, this is gratifying. It not only materially influences the pronunciation of the word when the healing balm is enquired for at the druggist's, but it indicates the important fact that we have at last some acquaintance with the outside of the bottle.

Thus does "science" leap with seven league boots! In the fulness of time we may yet learn the inside of the bottle, and when we come to be completely freed from the trammels of pathology we may even know the inside of the bird.

W. Geo. Creswell.

Post Mortem Reports.

(*Vide Rules*).

BLACK-BACKED TANAGER. (Mrs. Miller). This Tanager was an example of the usual fate attending the majority of newly imported birds, septic enteritis being the cause of death.

GOULDIAN FINCH. (Mrs. Rogerson). Injury to the skull, producing extravasation of blood in and under the bone. It had probably been caused by a blow from the beak of another bird.

PARADISE WHYDAH. (Mr. Howe). This bird came back from a show very ill and suffering from profuse diarrhœa, the result of acute enteritis, presumably due to improper food while away from home combined with sudden exposure to cold after travelling in a closed up receptacle, in which there can hardly be sufficient ventilation to keep the air pure.

GOLD-CRESTED WREN. (Mrs. Vernon). Congestion of the liver was the cause of death, the result of a long course of too rich and stimulating a food. The mealworms were all right, but I expect egg is present in the stock mixture.

CANARY. (Miss Gibbons). Pneumonia. The feeding was correct, though an *occasional* change to a more oily seed would have improved it. The cod liver oil and sherry treatment is of no use. W. GEO. CRESWELL.

Correspondence.

BIRDS IN A GARDEN.

SIR,—Referring to the very interesting account of Chaffinches seeking shelter from a gale given by the Hon. Mrs. Somerset Ward in the December number of *Bird Notes,* I am led by this and my own observations to regard the Chaffinch as an exceedingly interesting bird, bold and confiding and altogether charming in his ways. For the last two or three years I have daily spread food in my garden, and amongst my guests have been three pairs of Chaffinches. The spot chosen for the food is about eight or ten yards from the house door, and when there is no food these birds frequently come cheeping right up to within a yard of the door. They never show the slightest sign of fear. I have also a pair of Tomtits who will visit a mutton bone or other tit bit hung in a trellis arch, and feed off it quite regardless of my near presence, *i.e.*, three yards off.

When standing near the feeding ground the Sparrows will come and feed without taking any notice of me, but the Starlings, of which there are generally two or three pairs, will not come to ground, but will perch close by on a post or large shrub and swear heartily at seeing the Sparrows clearing the table, every now and then making an abortive attempt to gain confidence enough to alight, but invariably returning to their perch after a circuit of about a foot or so, and finally quitting it altogether to seek other fields on finding that I do not give way.

A. H. CRESWELL.

A HOLOCAUST.

SIR,—A correspondent recently sent me seven dead birds, requesting me to tell her what had caused their death.

Of the seven, three were Budgerigars and four Madagascar Lovebirds. They had all lived together to the number of thirty or forty in a garden aviary, and were perfectly healthy and in good condition.

The gardener had left them all right at 5 o'clock, and when he went to look at them in the morning there was only one to be seen in the aviary, a Canary; all the rest had unaccountably disappeared. He searched all round for some weak place in the aviary where the birds might have escaped, without finding any.

The door was securely padlocked as usual, so that they could not have been stolen, and on entering the aviary he only saw a few feathers scattered about, and no trace of any bird but the one Canary already mentioned.

What could have become of them?

On looking about again he saw the tail of a Budgerigar sticking out from some loose boards in a corner, and on lifting these up found a hole completely filled with dead birds, but could see no communication whatever with the outside.

When I examined the bodies they were not mutilated in any way, but there were punctures either on the head or the neck made by the small sharp teeth of some animal, which had sucked out all the blood from the victims. One of the Budgerigars, however, was without these wounds, but there was a large patch of extravasated blood on the head evidently caused by the bird banging itself about against the wire in its flight. So that one at all events had not been killed by the invading animal, whatever it might have been.

My correspondent had suggested rats, a weasel or a stoat.

Rats however would have mutilated the remains, and the teeth marks were too small to be those of a stoat, consequently in my opinion the death of the birds was brought about by a weasel or weasels, which by some means had gained access to the interior of the aviary, possibly through a hole made by mice which had escaped the gardener's notice.

It is not usual for weasels to drag away their victims and hide their bodies, though they appear to have done so in this case, and the gardener thought, as some of the birds were altogether missing, they must have been dragged into an adjoining wood.

Perhaps some of the readers of *Bird Notes* may have had some experience of weasels in a similar case, and will be able to say if they have ever known them act in that manner, as I have generally known them to leave the bodies after sucking the blood.

W. T. GREENE.

MRS. VERNON'S BIRD ROOM.

SIR,—I venture to send you a few lines on my indoor bird-room in hopes that they may be of some assistance to beginners in aviculture.

First, the room is S. West as to aspect and has the greatest amount of sunshine possible, for it is wonderful what even a short half hour's sun will do to cheer and brighten up the foreign birds, especially after days of rain such as we have lately been experiencing. It has two large windows, and whenever it is fairly warm the big cage of Waxbills goes out and remains out until the sun no longer reaches it. On the walls I have at present eight large cages, mostly home-made—wood on three sides, top and front wire, painted uniformly on the inside a pale blue in enamel paint (which can be easily washed) and stained a deep mahogany outside. I have a thick layer of gritty sand fresh every day with some sea sand and "Hydes" added. The Waxbills get grass seed, maw seed and fresh flies, which they love, ants' eggs, and some of any soft food going, "Bacozzi" and a big clump of grass with seed, or chickweed and sometimes lettuce, and of course the usual two millets and canary seed. A big bath with three sides glass is given to them in which they bathe freely, tumbling in two or three at a time, and fighting the late comers for possession. I never give the bath after 10 a.m. and not on very foggy days unless I have a fire in the room for them to dry quickly. In this cage I have the following birds, two cock Firefinches, a pair of Cordon Bleus (the hen has laid ten eggs and has twice been egg bound, but I have been lucky in curing her), four Orange Cheeks, four Avadavats, two Waxbills, and four Orange-breasted Waxbills. With one pair of these I got 1st prize at the C.B.A. Show the other day. They all know me and I give them six or more small mealworms (which they love) every day, and they call to me if they hear my voice. They are most intelligent little mites, and their little ways are fascinating to watch.

The next cage contains a yellow-billed Cardinal. He is very tame and flies about the room while I write, he loves mealworms, and always has his tub outside his cage. He is a very small eater and prefers canary to millet and does not touch the spray millet. His name is "Felix."

Next to him are "Punch and Judy," (all the birds have their names over their cages, it looks very smart), a pair of charming white Java Sparrows. They have a nest receptable of the cigar box type, with the cut off portion of the lid hinged down to form a platform, on which they love to sit and make and unmake the nest all day. They are very tame and come on to my arm and will let me catch them and do not mind, though if Punch is annoyed any piece of loose flesh is good enough for him to show it on, and he will not let go in a hurry either.

Next cage—"Jacob and Rebecca," a pair of grey Javas—solemn and retiring. Their one charm is their awful neatness. I think they must be of the Quaker persuasion in bird life, and like the Parrots they think a bit. They like paddy rice with their millet and canary, and a bath sometimes, but they are not so cleanly as Punch and Judy, their smart relations, who take a daily and sometimes twice daily bath.

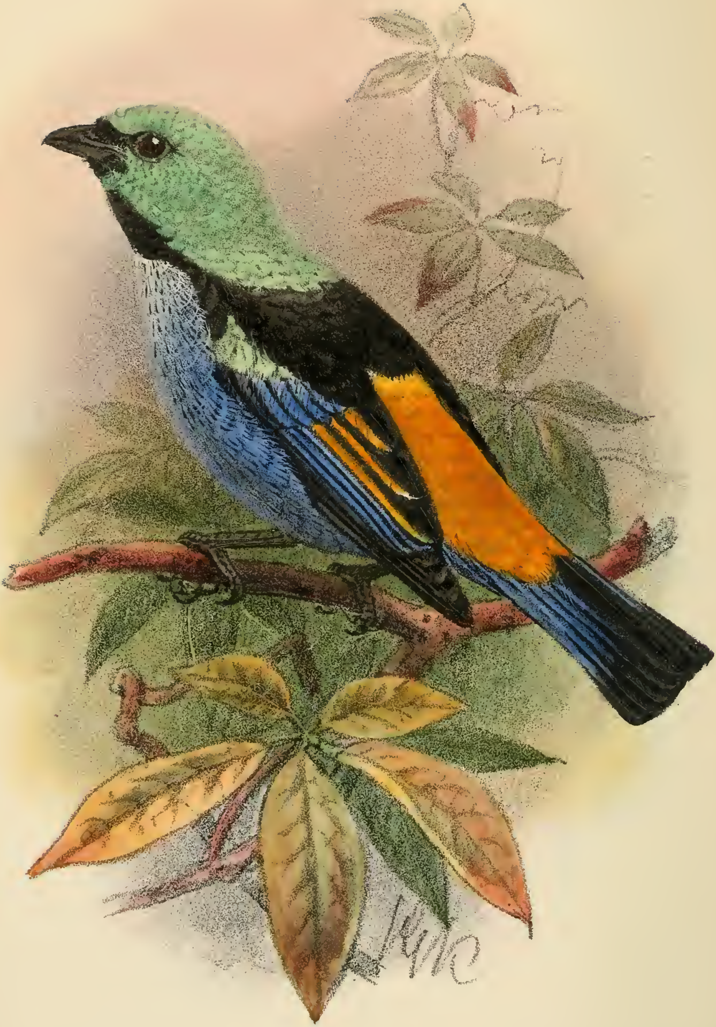
I have a lovely Red-headed Gouldian. He is a mourning widower, for his wife died lately, and though he shewed absolutely no affection for the deceased lady during her life, man-like he now regrets her and is moping, so I am going to provide him with another wife, this time a red head. The poor deceased was black, and perhaps he will like auburn hair better than the darker shade.

Now we come to three lonely Bullies, all tame and all very brightly clothed in scarlet waistcoats. I give them grass seed and maw in addition to German rape and canary. When let out they all go to the same bath and fight, and one always wins, so his name is "Cœur de Lion."

A pair of hand-reared Chaffinches finishes the present lot. They are jolly little birds and are called "Tarin" and "Tarinne," quite tame but vicious to all other birds.

I will write more later as I have many birds on order.

E. Warren Vernon.



J. G. Keulemans del. et lith.

West, Newman imp.

SUPERB TANAGER.
Calliste fastosa.

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BIRD NOTES:

THE JOURNAL OF

THE FOREIGN BIRD CLUB.

The Superb Tanager.

Calliste fastosa.

By C. CASTLE-SLOANE, F.Z.S.

This gorgeously - feathered Tanager makes a delightful cage bird if kept in a fairly large cage, soon becoming very tame. He is not much of a songster, but makes up for it in the extraordinary beauty of his plumage. The one I possessed soon became familiar with me, and would come to the door of the cage with a chirp and a flit of his tail, as much as to say "What are you going to give me to-day?": he would take mealworms from the hand, and after swallowing one or two would hold the next one in his beak, uttering short chirps of delight and flitting from perch to perch, then, swallowing it, would dart down for another, going through the same performance. His other food consisted of banana, orange, dried flies, ant eggs and powdered biscuit in equal proportions, which he appeared to thoroughly enjoy. He was always a lively bird, and when the sunlight caught his wings he was a thing of beauty and a joy—(I use my discretion by curtailing Keats's beautiful line). Fond of bathing he certainly was, taking a bath every day. His cage was three feet long, about the same height, and two feet broad.

The true Superb Tanager has the upper surface of the head and neck of a glittering emerald green colour; the back is velvety black in front, and brilliant orange or bright cadmium yellow behind, the wings and tail are black, edged above with purple, and blackish below; the outer secondaries are brilliant orange: the lesser wing-coverts emerald green; the under surface of the body deep purplish blue, becoming silvery blue on the breast; the middle of the throat and the chin are black, divided one from the other by a line of greenish blue; length of bird five inches and eight-tenths; bill black; legs dark brown; iris of eye brown.

The female is like the male, excepting that its colour is less brilliant.

The Superb Tanager is a native of Pernambuco, and, according to W. A. Forbes, is believed to be peculiar to that province, from which place "skins are "occasionally received by the dealers in Paris and "elsewhere.

"It is a species often seen, too, alive in the "Zoological Gardens of Europe, though no naturalist "seems to have yet met with it in the wild state. It "does not appear to be common in Pernambuco, at "least I only met with it twice: once near Macuca, "where I shot a female out of some bushy capœira, "and again at Quipapá, where I saw what I believe was "this species in the virgin forest. The bird, however, "was perched at a great height from the ground on "the topmost branches of a large tree, and only the "brilliant orange of the rump was visible. Whilst "staying at Cabo a freshly-shot adult of this bird was "also brought to me to skin."

The nest and eggs of the Superb Tanager and its near relatives seem not to have been described; but they are probably not unlike those of other species of Calliste, the nests of which are cup-shaped, with plenty of moss outside, sometimes mixed with slender twigs; the inside lined with fine roots and horse-hair; the eggs with a greenish ground-tint speckled and spotted with some shade of brown and lavender. An illustration of the egg of one of the species of Calliste seemed to me to resemble that of a Warbler rather than of a Finch.

From "Wonders of the Bird World" (R. Bowdler Sharpe) we get the following information under the heading of Tanagers. "Nest in various situations, "cup-shaped, of grass-stems or lichens, in trees or "bushes, sometimes domed, or in grass in marshes. "Eggs white, bluish, or greenish, with spots and "blotches of brown. North and South America."

In their wild state this and the other allied Tanagers frequent the tops of tall trees, only coming lower to feed upon oranges or other sweet fruits, and to nest. The call note of this bird is a shrill excited chirp, sometimes repeated several times in succession, usually when flitting from perch to perch or running on a ledge and shuffling its wings like an Accentor. Its ordinary song is harsh and Weaver-like, but when first awaking in the early morning it sometimes sings a very pretty reedy song, recalling that of the Indigo Bunting.

I am glad to see that one of our members has an outdoor aviary for these beautiful birds (Vol. 5, p. 13), and to hear that they are doing well. Mealworms are invaluable for them, and you cannot give too many. At one time my Tanager was looking mopey, so I gave it as many mealworms as it would eat, which soon put things right. I have never found mealworms do any harm, even when I have given more than was necessary to satisfy the birds.

[There is absolutely nothing in a mealworm to harm a bird, not even the chitinous outer covering. The prejudice that exists against them in many quarters is perfectly senseless, and is due only to the imagination of those who know nothing either of the analysis of a mealworm or the physiology of digestion, whether in birds or other animals. There is but one objection to the use of what I have seen described as the "useful but imperfect (!) mealworm"—that is, the price they command. Any other objection is only worthy of the author of the astounding dictum that since spiders live on insects, a few of these given to a bird represent much insect food.—Ed.].

Concerning Rooks—both Wild and Tame.

By W. Geo. Creswell, M.D.

(Continued from page 265).

With regard to the bare face patch it is generally believed, since young birds always exhibit the feathers and stiff hairs that we see in all the other members of the Corvine family, and since the Rook is the only one which habitually digs in the ground (the Hooded Crow only following the plough for a limited season), that this patch is caused simply by attrition. And while there is evidence in favour of this view, there is also a certain amount against it, with the result that the prevailing opinion amongst modern ornithologists is that the patch is natural to the species and not an acquired character of the individual. Blackwell, after saying that he once saw a Rook with its beak so deformed that it could not possibly dig, and that it did *not* show the bald patch (thus pointing towards the popular opinion), goes on to recount that a young bird, which he moulted in a pen, cast off the face feathers in this first moult and did not renew them in either of the two which it lived long enough to undergo subsequently. He therefore was of the opinion that "the phenomenon . . . has a physio-"logical, not a mechanical cause, though the removal "of the plumage may be facilitated by the frequently "repeated act of thrusting the bill into the ground." Waterton also records in his Essays an experiment, which, although abortive, yet seemed to point to Blackwell's conclusion. The evidence afforded by the bird which originally prompted this paper is as follows :—Caught on June 5th, 1900, he had the run of my garden during August, and moulted during September and October. His owner says : "He died "in July, 1901. He never lost the bristles at the base "of his beak. The beak was never bare of tiny "feathers. I thought this was because he never had "to dig for his living."

Dr. Bowdler Sharpe says it is certain that the young birds retain their feathered face after their first moult and carry it through their first winter ; and that though most of them lose it in the spring, there have been killed several specimens which even in May had only partially bare faces.

After all the evidence seems very contradictory, that is, if it is sought thereby to establish either one or other of the two views. For my own part I think Blackwell was right in his compromise.

A correspondent of *The Feathered World* (writing over the initials J. B. W.), a few years ago contributed some very interesting notes on these birds, having been prompted thereto by a short account of the Rooks in my garden which I had previously published in the same paper. After stating that he has a powerful telescope fixed on a stand in a window at the top of his house and commanding the estuary of the Mersey, and that opposite this window there is an old pasturage of extensive acreage, he tells us that one day he saw a Rook flying across this field with something large and light-coloured in its beak. This Rook alighted at the foot of an old thorn bush on the far side of the field, and by the aid of the telescope his burden was seen to be a large crust of bread. This he proceeded to hide by digging a hole into which he dropped it, afterwards covering it over with the torn up grass and roots. The next day, while again amusing himself with the telescope, the narrator saw *two* Rooks fly across the field and go straight to the thorn bush. They then immediately dug up the crust and ate it between them.

From this it would seem very clear that wild Rooks do hide their food when they chance to get hold of anything out of the common, and which is too much for a single meal. But even here the evidence is not conclusive, because J. B. W. had once kept a tame or semi-tame specimen in his garden, which in all probability was still in the neighbourhood. Let me quote his own words on the subject of his interesting pet :—" It came into my possession in rather a " curious way, having flown on board a ship in the " North Sea. Being secured by a sailor it had one " wing cut, and was given the run of the deck. When " I had it given to me I had a large wire pen made for " it in the garden. It never became really tame, but " distinguished me from other people. When it " moulted and grew new feathers in its wings, I " thought it was a pity to keep it in solitary confine-" ment, so let it out in the early autumn to join its " wild brethren. I was rewarded by its return to its " cage as soon as the hard winter weather set in, and, " for many winters after, Jack, as we called it, came " regularly to his old cage for the food placed there. " I never was more surprised in my life than the first " time I saw him come to the garden in the snow and " go into his old empty pen. He walked in in the " most unhesitating manner, hopped on to his " accustomed perch, and gave his feathers a shake. I " at once got some food and went up the garden. As " soon as he saw me coming he slipped out of the " cage and flew away to a tree about a hundred yards " off, but before I was back in the house he was on the " top of the pen, hard at work on the plate of food. " Another interesting point is that, before this episode, " our gardens had never been a resort of Rooks, even " in the winter, being too near to houses; but after " this they used to come, perhaps half-a-dozen at a " time, and watch Mr. Jack on or in his cage. I may " say that after his return I never shut him in the " cage. Now and then one of them would make an " attempt to alight on the cage, but Jack always "resented this, and would charge the presuming "stranger with much fury. I used to feel so sorry for "these other rooks, and put food for them at a little "distance from the pen, on the top of which Jack "paraded as king of the castle. It was very amusing "to see this bird when he arrived one year to take up "his winter residence, and found that the pen had been "altered to make a pigeon flight. Poor fellow! He "went round and round the sides of the pen with the "peculiar Rook waddle much quickened, as if to say "'Bless me! I'm sure I used to be able to get in "here!' Of course I continued to put food for him "on the ground . . . . I cannot remember "whether the incident I witnessed of the Rook hiding "the crust occurred prior to the release of my captive "or afterwards, but I think it was after. If it was "before it would seem to throw the balance in favour "of the theory that wild Rooks do act so, and why "should they not? If it was afterwards then perhaps "the bird was my old acquaintance. I wish I could "remember; it is very aggravating. Dr. Creswell's "account of the Rook in his garden stealing food from "the Starlings . . . . . reminds me of a way I had of "feeding Jack by 'sparrow-post.' When it was too "cold and snowy for me to go out I used to throw from "the window with the other food a largish crust of "bread. This the Sparrows . . . . would gradually "carry (some score of them) further and further up the "garden. Then suddenly . . . . down would swoop "Jack, and from among a scatteration of Sparrows bear "away the crust in triumph. One day . . . . . a "Jackdaw swooped down and stole the crust from the "Sparrows, when the outraged Rook, highly indig-

"nant, swooped at the Jackdaw and pursued him beak "to tail over miles of snowy fields, the Daw still "carrying the crust till I lost sight of them."

This charming account from the pen of one who is evidently an accomplished observer, coupled with my own experiences and those of the real owners of my bird, makes it quite certain that our conservatism in always shooting young Rooks, instead of taming them, is the cause of our depriving ourselves not only of some very delightful and intelligent pets, but also of the opportunity of coming to some definite conclusions as to the vexed question of the denudation of the face feathers. A score of birds kept for three years from the nest under different conditions, some in aviaries with cemented floors, and some in large wired in portions of soft ground with shelters for them to roost in, would settle the question.

The Grey Parrot.

By I. D. Murray.

Although by no means an expert in Parrot matters, I have gleaned much useful information from the various birds I have kept. My experience so far has been entirely with the Red-tailed West African Grey, although I fully intend to go in for other species at an early date.

First of all let me advise all would be parrot keepers to avoid the bird advertised as "a fluent talker warranted to say over 100 words and many long sentences," the price generally being about £1. The talking powers as a rule consist in hideous screams, and the purchaser is lucky if the bird does not bite everyone and anyone who comes near the cage. It is hardly likely that anyone would, for a sovereign, part with an entertaining pet, and I do not think anyone will deny that a parrot who really talks is about as amusing as anything one can keep.

If you cannot get a friend to bring home a bird from Africa, choose a young imported bird which does not aspire to the title "linguist." Furthermore, wildness should be no drawback, as parrots are from my experience not naturally bad tempered birds, and wildness will soon be overcome by kind and gentle treatment. By kindness I do not mean the pernicious habit of feeding the bird at every opportunity, which is apparently to some people the very acme of kindness to birds.

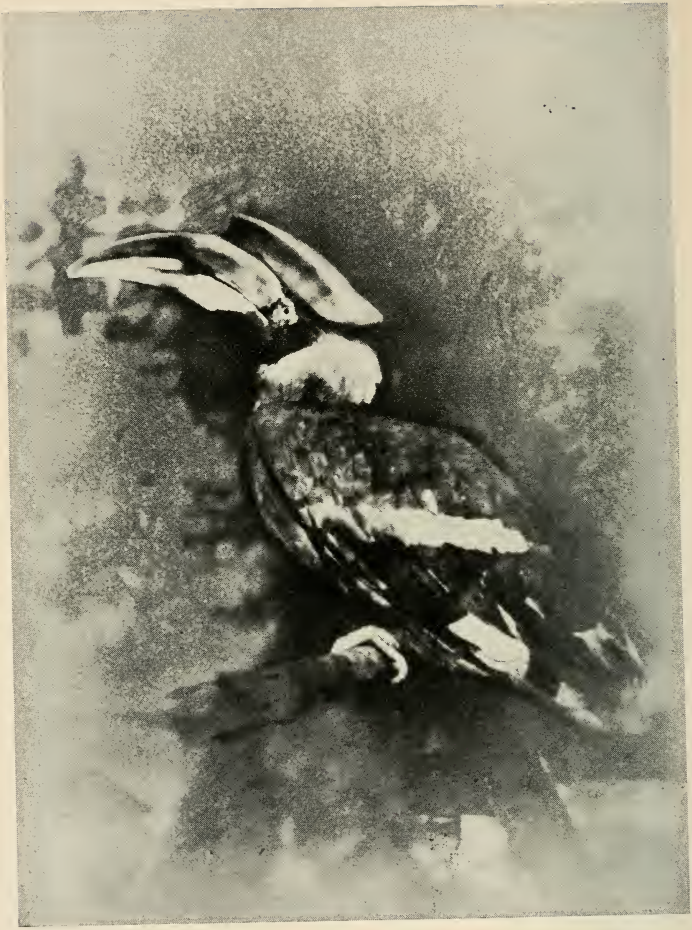
We will now suppose you have bought your parrot. In all probability, if a young bird and wild, she will treat you to a very realistic imitation of the dying screams of a "stuck" pig. This I think must be the the natural curse of a parrot, as I have found all young wild birds indulge in it. It is a most fearsome sound and the only way to check it is to cover up the cage. When buying a parrot, the approximate age can be told by the eye. In a bird over twelve months the eye is grey, but in a younger one it is brown. After you have had the bird about a week you will probably find that the screams are not indulged in when you feed the bird. This I think may have given rise to the feeding practice to which I have already alluded. If however the parrot persists in screaming, cover her up, gently, do not flourish the cover about; indeed everything should be done in a quiet way so as not to frighten the bird unnecessarily. When one remembers what the "unfortunate" has most probably undergone at the hands of a none too gentle nigger, it is not difficult to imagine what sentiments the approach of a human being, white or black, must inspire in the parrot's breast. The only effectual punishment, which at the same time does not spoil a parrot's temper, is the covering up of the cage. This generally is a speedy method, and indeed I have cured a chronic screamer in this simple way. Having got the bird to know you well enough not to scream at your approach, you can commence her real education. Let her get gradually accustomed to your hand, at first outside the cage. Go gently and by degrees you can try to stroke her. At this period you are almost sure to get a pinch. The greatest mistake is to draw your hand away suddenly. If you are going to be pecked you may as well show the bird you are not afraid, and the more you trust a parrot the more it will trust you. At the same time, like dogs, parrots seem to recognise if one is afraid of them, and certainly one hears more of timid people getting bitten. The parrot really only digs at the hands in defence, and to drive what must appear a very strange object out of her cage. If she finds a peck will not do this she will soon give it up. At the same time I should not care to handle a parrot until it showed no shrinking from my hand outside the cage, nor should I advise anyone else to try it. When however you feel she no longer fears you, put her cage on the floor and, provided her wing is cut, which operation should be performed before you start taming, let her come out. Her invariable course is a "bee line" for the top of the cage. Now offer your finger as a perch, and it is rarely a parrot will lose the chance of getting a step higher. After repeating this two or three times the parrot will gladly come on your finger whenever invited. This accomplished, the training is complete, and although perhaps a more laborious method than others, I find it the most satisfactory. As to talking, I think by far the best plan is to have the bird in the room with you whenever possible, and by hearing conversation she will pick up more and will pick it up quicker than by having one sentence dinned into her. This repetition method often leads to a bird returning the compliment and repeating one sentence until you feel inclined to wring her neck. I have tried both methods and will never go in for the repetition business again. One is very apt to become annoyed, and in all probability your heated remark will be picked up at once whilst your oft repeated phrase will be ignored. I have often noticed that a cock parrot prefers a lady and a hen a gentleman; many fellow parrot lovers have noticed the same fact and in choosing a parrot it does no harm to bear this in mind, which, if the contention is correct, may make a tremendous difference in the length of time in training and taming. I always myself choose a hen, and so far have been most successful.

As to diet a newly imported bird does best on maize, and if the bird is young and its beak at all soft, the maize should be steeped. I have found nothing to beat Hyde's parrot mixture as a staple food. This should be gradually introduced amongst the maize. Each feed the maize should be decreased until the bird is right on to the mixture. If you find that any particular ingredient is entirely and systematically left by the parrot, have it omitted from the mixture. Everyone advocates a special food and I only give my fancy. I have never lost a parrot so far, and the diet has always been the same. A lady in all seriousness told me the other day that the only way to get a parrot to eat any particular food was to starve it until it did eat it. In spite of being considered vindictive or spiteful I should dearly like to find out some article of diet which my good friend disliked and starve her till she ate it. Surely a bird is entitled to its fancies as well as a human being. [It is not always well to allow a human being to indulge his fancies.—Ed.]

Give the bird plenty, but see that the allowance is eaten, otherwise one extra choice ingredient may be singled out and all the rest thrown away. After the tin is empty you will generally find Polly will descend and clear up the previously discarded food. All parrots should be allowed a plentiful supply of grit and should be kept scrupulously clean. Also avoid the wicked habit of depriving the poor bird of water; give a plentiful supply and change it every day. Of course if the bird has been deprived of water, begin with a small quantity.

My first parrot experience was when I was twelve. A friend brought back a parrot from the West Coast. Believing my way of distinguishing sex to be a correct one I will call her she. She almost at once took a fancy to me; I must say this fancy was most heartily reciprocated and I never wish to meet a more charming bird. She was very quick and learnt all manner of curious sounds, amongst which was an exact imitation of the whistle of a speaking-tube. This useful contrivance was fixed between the dining room and the kitchen, and my mother did the ordering of dinner etc. down this tube. One evening when the cook was very busy and extremely cross, Polly began the tube whistle from the next room. The cook left her many and varied duties to answer the tube; of course there was no one there and the cook apparently thought she was mistaken. Hardly had she resumed her duties when again the whistle blew, and again the cook left what she was doing. All would have been well had not Polly again whistled. Cook had a toasting fork in her hand and, I grieve to relate, she used it upon the bird to no small purpose. I feel convinced this was not Polly's first experience of the toasting fork. It was however the last, for after that her temper was so ruined that an approach to the cage was a signal for hostilities, and although before this I could do practically anything with her, I was also included in the ranks of the offenders, and I was never able to handle her again. I relate this incident as a warning to hasty people. Never beat a parrot. If it is necessary to correct her cover her up, but do not beat her with the toasting fork.

I am at present engaged in the taming of a bird which has only been in England a fortnight. I anticipate however that ere the month is out she will be perfectly tame. My other Grey, which is only a year old, is perfect and has started talking. She has tremendous battles with everything, but is most gentle in her ways. There is one thing to be thankful for, and that is that through common sense bird books and papers the revolting practice of tongue cutting has been done away with. We still have much to learn, but with so useful a paper as *Bird Notes* now with us



CONCAVE CASQUED HORNBILL.
Dichoceros bicornis.

the Member who wishes to keep a bird must indeed be dull if he or she cannot understand practically any species taken up.

The Concave-casqued Hornbill.

Dichoceros bicornis.

By C. CASTLE-SLOANE, F.Z.S.

I was so pleased with the tameness and affectionate nature of my Black Hornbill that I determined to purchase others when the chance came. It was not very long before I received a wire something to the following effect: "Pair of monster hornbills from India, shall I send?" After debating as to whether I would purchase or not, and although advised not to buy, I wired "Send," and thus became the owner of a pair of Concave-casqued Hornbills.

Their plumage is mostly black, relieved by a broad yellow collar and about mid-way on their wings by a bar of white. Both these birds were fairly tame, and I was hoping they would become as tame as the black one, when unfortunately one of them died. This one was the tamer of the two, and would come hopping from perch to perch to be fed with a banana. It was very funny to see how, when the two were sitting on the perch, one would look at the other and hop over him, coming down plump on the other side. After doing this they would then open their bills very wide and catch each other by one of the mandibles with a loud croak of satisfaction.

These birds are fond of mice, swallowing them whole when thrown to them. (I offered one to the

Black Hornbill one day but he merely gave it a poke with his beak and would have none of it). I was very much surprised to see one morning on entering their aviary, that they had caught a rat and were playing with it, but I suppose it would have been too much of a good thing if one of them had swallowed such a large mouthful.

The following I take from an article by Mr. Finn in *The Bird World* for Dec. 1905. "The largest and finest of all hornbills is the concave-casqued (*Dichoceros bicornis*). In this bird the plumage is pied, and the casque very broad and concave at the top, while there is a curious sex difference in the colour of the eyes, those of the male being red, while the female's are white. I once saw quite a nestling of this species in Calcutta: it was about as big as a duck, and only feathered on the head, wings, and tail, the bare skin and body being of a purplish blue. This bird is found in India (especially in the lower Himalayan forests), and in the Malayan countries, the mountain specimens being the largest birds, and reaching over four feet in length.

Both in Toucans and in Hornbills the bill is really far lighter than it looks, the bony interior being of a spongy texture, while the horny casque surmounting the bill in the latter family is quite hollow, except in one species, the Solid-casqued Hornbill (*Rhinoplax vigil*), in which the front of it is solid. The use of this curious adornment is unknown, the best suggestion I have heard being one made to me years ago by a missionary in East Africa, that it may serve as a resonator to increase the power of the voice, which is very loud in these birds. Fledglings have not this growth on the beak; and the whole bill in them is smaller than in adults.

The Hornbills fall into two groups, the Ground Hornbills and the Tree Hornbills; the former, of which there are only two species, are confined to Africa. These are both large birds about the size of Turkeys. These are ground-birds and animal feeders, walking about in search of such prey as snakes and other reptiles and insects. They roost, however, on trees, and build their nests there, making them of sticks in quite an ordinary way."

The Crows of the Fen Country.

By C. H. C. Pengelley.

The crow family is well represented in the country lying along the Great Ouse, where this river enters the fen lands, by the following five species, viz., the Carrion Crow, the Rook, the Hooded or Royston Crow, the Jackdaw and the Magpie, and as regards the first on the list, it would probably be very difficult to find a place where it exists in greater numbers.

It may be seen everywhere either singly or in pairs, and one of the commonest sounds is its hoarse "kraa" "kraa" as it flaps along, ever on the look out for something with which to fill its omnivorous maw. Nothing comes amiss to this English vulture. Any fish he finds on the bank is soon reduced to a few scales and clean picked bones, and I have seen him help himself to fish lying in an empty punt quite close to houses when no one was about. Dead birds, rats, mice, etc., are also included in his diet.

All day scanning the country for food he retires at night to roost in the high trees that here and there break the monotony of the hedges, and is sometimes one of the latest birds to retire, his grating cry being heard overhead when the bird himself is hardly visible against the darkening sky. Solitary as these birds are in their habits by day, I yet know of a grove of common poplars (locally called aspens) where the Crows congregate to roost in such numbers as would not discredit a good sized rookery. They generally choose high trees for building purposes, whose height affords protection from enemies, but will sometimes, in common with other crafty birds, lose their habitual caution as regards the site for the nest, and build in a low bush or hedge within the reach of any passer-by. He is a great persecutor of the Kestrel Hawk, and will fly at the Heron if the latter approaches too near his nest.

The Rook is common in this district, but does not haunt the river so much as the Crow, paying more attention to the fields, whence he returns at even to the rookery near the old grey church tower, where he is safe from the machinations of prejudiced and ignorant agriculturists.

Like the Rook the Jackdaw flourishes under ecclesiastical protection, and finds the church towers most convenient nesting places. When fledged they assemble in small flocks, feeding in the fields, and sometimes take wing like a flock of pigeons, making a tremendous clamour, as if each individual Jackdaw was trying to caw his loudest.

The Royston or Hooded Crow is a fairly common visitor, appearing some years in greater numbers than in others. It haunts the river like the Carrion Crow and appears to have the same habits.

Last on the list is the Magpie, one of the most beautiful of our native birds both in colour and form, and probably second to none in intelligence.

His chatter may generally be heard from some hedgerow, or his striking plumage be noted against the green vegetation as he sails over the hedge-top. He, like the Crow, is omnivorous, of which I had once a good illustration. Seeing an old bird feeding its fledged young ones on the ground in a grassy lane with some large object, and after watching them dining for some time, which was a pretty sight, curiosity got the better of admiration, and I carefully approached them with a view of investigating their menu. They flew off, but fortunately without taking the remains of their feast with them, which I discovered to be composed of a quite fresh corpse of our largest species of Bat.

Editorial.

FOREIGN BIRDS IN WINTER: During the recent extreme weather, characterized not only by lowness of temperature but also for some time by a biting north-east wind, the birds in my outdoor aviaries have been particularly lively and well, even such tiny mites as Zebra Waxbills. Although a closed in shed made of half-inch match boarding, forms part of the aviary in which the small foreigners live, many of them persist in roosting out in the open under all stress of weather. The only bird which has died out of doors was an odd Zebra Dove in the Quail aviary, and this had evidently received an unlucky blow on the head from one of the Quails when feeding. A curious fact in connection with its death was that when I missed it from the perches it was some minutes before I found its body, and it was only when I investigated an eminence in the sand at the side of the seed box, with a few discrete feather tips emerging above the surface, that I was able to discover the tragedy. The body was not quite cold. The affair presents a problem to those interested in the psychology of the lower animals. Those who have kept Quails are well aware that they scratch holes in which to squat, but in this case there was no special appearance of any hole alongside the dead bird. The sand seemed to have been taken up from all sides.

In previous winters it has always been my custom to remove the ice from the drinking pans and supply fresh water both morning and afternoon. This winter however, owing to the abnormal pressure of professional work, I have only been able to do this once a day, between one and two o'clock, and I have found this quite sufficient. The first time it occurred it was absolutely unavoidable, and when at last I was able to repair the omission of the morning, in spite of one's knowledge that thirst depends largely upon the amount of evaporation from the body surfaces, I expected to find an eager crowd tumbling over one another to relieve their cravings. I was therefore somewhat surprised to see that many of the birds did not come down at all for some minutes, although I retired to the other side of the garden well away from their neighbourhood. Since then I have felt no qualms of conscience.

Birds also appear to vary specifically in their behaviour with respect to water, for while the Canaries bathe directly water is substituted for ice, many of the

Ploceidæ seem to be more or less indifferent, (though some individuals wash daily), while the Parrakeets and Conures I have never *seen* even drink. Of course I am here only speaking of my experiences during hard weather. Budgerigars, by the way, never bathe even in summer, as is well known, though I have sometimes seen one standing by the bath to receive the splashing from other birds.

In my dining room I have a few small foreigners and a young Diamond Dove. The former always make use of the bath when supplied; the latter has never done so yet. W. GEO. CRESWELL.

Reviews.

The Birds of the British Islands. By Charles Stonham, C.M.G., F.R.C.S.. F.Z.S., with illustrations by L. M. Medland. Part IV. Roy. Quarto, 7/6. *Grant Richards.*

This part, which completes the first volume of Mr. Stonham's classical work, is fully up to the high standard achieved by its predecessors, both in text and illustrations. The range of birds it treats of includes the Wagtails and Pipits, the Golden Oriole, the Shrikes, the Waxwing, and the Flycatchers. And not only are the regular inhabitants and visitors fully described, but, as in previous parts, the rare and accidental visitors get a short, though sufficiently detailed notice.

We are apt, and rightly apt, seeing that school and college life is too short for any one to specialize in both Classics and Science, to congratulate ourselves that in our "Secondary" Schools, (as the old Grammar Schools are now called), the Natural and Physical

Sciences are made to take the place of pre-eminence once held by the classics of the ancients. But those amongst us who in post graduate life have grafted the teachings of modern science on to the old stock of classical training often feel that a member of the younger generation is likely to be somewhat at a loss when handling those terms, derived from the dead languages, which are used in all sciences as a kind of universal exchange. What for instance does *Lanius excubitor* mean to such a one when he sees it attached to the Great Grey Shrike? It means nothing: it is but a mere formula—to him of the most empirical character. But if he turns to Mr. Stonham's book he finds, under the heading Laniidæ,

> "*Lanius*, a butcher. The Shrikes have a habit of killing their prey and spitting it on a thorn."

Further on, under the name of the particular member in question of the family, he finds

> "*Excubitor*, a sentinel. This name was given to the Great Grey Shrike by Linnæus because the Dutch falconers made use of it to warn them of the approach of a hawk, which they then captured by means of a decoy pigeon and bow-net. . . . ."

Again, we are told that the name given to the genus *Muscicapa* is derived from *musca*, a fly, and *capio*, I catch, and on turning to the Pied Flycatcher we see that *atracapilla* is from *ater*, black, and *capillus*, the hair of the head.

All this may appear trivial to many elderly and middle-aged survivals of the old school, but the difficulties of the oncoming generation of naturalists are by it at once abolished. The scientific names become intelligible phrases, and not mere fragments of jargon.

The descriptions of the birds themselves are equally impressive, and betray an intimate acquaintance with their habits on the part of the Author.

With regard to the plates, these are of the same high character as the previous delineations of the talented Artist in this work, but special praise must be accorded to those of the Shrikes. Among these there is one of the female *Lanius collurio* feeding a fledgling on a bough, which it is safe to say is absolutely perfect, both as to its technical treatment and its beauty of sentiment as shewn in the facial expression of parent and child alike.

The Bird World Magazine. Nos. 2 & 3 (Jan. & Feb. 1907). Quarto. 3d. F. Carl.

It is to be hoped that provision will be made in the binding cases at the end of the year for the inclusion of the covers of these interesting Magazines, since each one represents a striking portrait in colours of some different bird, shewing far too much merit not to be preserved.

The coloured frontispieces in these two parts represent respectively an extremely taking pair of Canary-Bullfinch hybrids by Mr. Norman and our native Kingfisher by Miss Medland. The former is in no respect behind the beautiful picture of the Bullfinches by the same gentleman in the first number, while the latter shews the fair artist to be equally at home in colours as in monochrome. That she has a future before her is the least we can say.

The letterpress includes papers on Pet Birds and Royalty by the Princess Helene Vacaresco and on The Heron by our lamented president, the late Dr.

Greene, two instalments of a most instructive History of Birds by Mr. Pycraft, and interesting sketches of the Kingfisher, Yellow Plantain Eater, and the Firefinches, by Messrs. Finn and Page and Mrs. Cope respectively. Mr. Finn also contributes some notes on the Vultures, and Mr. Kendrick of Homing Pigeon fame gives pleasantly written instances of the intelligence and endurance of some celebrated performers. In addition Miss Hamilton, Miss Rutt, and others take their share in the production of the most enterprising and popular bird journal of the day.

The text illustrations are very numerous and well produced. Amongst them those of the Sulphur-crested Cockatoo, the Kentish Plover, and the Dipper are particularly pleasing.

Post Mortem Reports.

(*Vide Rules*).

RUFICAUDA FINCH (Mr. Row). Pneumonia of the right lung.

BLUE MOUNTAIN LORY (Miss Conway-Gordon). This bird died from the results of a prolonged course of over-taxation—popularly known as over-stimulation—of its digestive organs. It was too fat, and the liver was extremely congested and much enlarged. The food was much too rich in character. Canary seed, fruit, and a little bread and milk is quite sufficient for the Lories.

W. GEO. CRESWELL.

NOTE.—*For the future, bodies for examination must be sent to* MR. GRAY, M.R.C.V.S., (23, Upper Phillimore Place, W.), *who has kindly consented to help his fellow members in this direction.*

Correspondence.

NESTING OF THE VIOLET-EARED WAXBILL.

SIR,—It may interest our Members to hear of the nesting of my Violet-eared Waxbills. These birds were exhibited at the Horticultural Hall in October last, and were then in the pink of condition. When they were brought home they were kept in their show cage for the night, and on the following morning they hopped right willingly into their own big cage, which was placed in a sunny corner of the drawing room, and indeed it was pretty to see their delight in finding themselves at home again amid the familiar surroundings and with their pretty bird companions on every side of them. I placed their favourite tit-bits in the cage and some flowering grass, and a cocoanut husk in one corner for a sleeping place. They soon began to carry up the grass to the husk, and also, by the way, to try to take pieces out of the curtains with their sharp little beaks, so I gave them some nesting material, and a very busy little pair they were, dancing and singing and putting the house in order. I cannot tell precisely when the eggs were laid, but shortly after the nest-making was finished I found one tiny white egg, and a few days after there were three more. At first I thought the hen was sitting all right, for she was in the nest nearly all day, but she evidently gave it up, for having carefully covered up the eggs she left them alone and resumed her outside life, and seemed as well and happy as usual.

The cage was an open one, and we are always about the room, and of course they are fed and looked after frequently; also there were other birds in close proximity all round them. Under these circumstances I thought it unusual for the birds to nest, and perhaps some of our Members can tell me if it is so and whether it is likely to do the hen any harm so late in the year. At present she is well and the male bird in most brilliant plumage. They are absolutely tame and the first pair of Waxbills I have ever kept. R. L. MILLER.

[Unless this bird has quite recently bred in this country I should say that Mrs. Miller is probably the first to have even got as far as eggs. Although known to Europeans for at least a century it has always been a rare bird over here.—Ed.]

THE FUTURE OF THE MAGAZINE.

Sir,—One or two of my friends have been talking to me about your leaving the Magazine, and we regret this because we fear we shall miss the advantages of the *Post mortem* examinations, and we have always appreciated the Magazine for giving us the real truth on the medical questions of our hobby. I hope we may still read papers from your pen on these subjects, and that the Magazine will have the same character as it has in the past. "Birds in London."

[I am much obliged to "Birds in London" for their kindly appreciation of the Magazine in the past, both on behalf of Mr. Fillmer and myself. Mr. Fillmer was broad-minded enough to realize that medical men should be better authorities on medical subjects than those whose education and businesses have been cast in other directions. For my own part it has been my desire, (and also that of Dr. Clarke), that those truths in general physiological and medical science, which of late years have been of so much advantage to both human beings and quadrupeds, should also be applied to the ultimate benefit of the birds we elect to keep in captivity for our own personal ends. And it must be remembered that the adoption or otherwise of these truths is an important factor in the very ethics of keeping birds.

For the future of the Magazine my correspondent need have no fear. Our new Editor, Mr. W. T. Page, is already well known to us by his comprehensive articles on birds in these pages, while on all medical and hygienic questions he will have the able assistance of Messrs. H. Gray, M.R.C.V.S., J. E. R. MacDonagh, M.R.C.S., and Geo. Master, M.B., who, I believe, are kindly going to serve on the Magazine Committee. A reference to the *Post mortems* will be found on page 300.—Ed.].

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Creswell, Alfred Henry, L.S.A., York Villa, Cinderford, R.S.O., Gloucestershire. (July, 1903).

Creswell, Evan James, 2, West Avenue Road, Walthamstow. (Oct., 1903).

Creswell, W. Geo., M.D., F.Z.S., Eden Lodge, Kingston-on-Thames. (April, 1903).

Cronkshaw, J., 100, Arden Terrace, Accrington. (Nov., 1901).

Cummings, Alexander, University House, The Promenade, Cheltenham. (Feb., 1905).

Curtis, Miss, Kearsney Abbey, Dover. (March, 1904).

Cushny, Charles, c/o Messrs. Neish, Howell, and Haldane, 47, Watling Street, Queen Victoria Street, E.C. (Orig. Mem.).

Dart, Henry, 53, Richmond Road, Kingston-on-Thames. (Feb., 1903).

Day, E. C., 238, Cromwell Road, Peterborough. (June, 1903).

Decies, Lord, Beresford Lodge, Birchington. (Nov., 1903).

Dennis, Mrs. Harold E., Warrenhurst, Itchingfield, Sussex. (Jan., 1904).

D'Evelyn, Dr. F. W., Phelan Building, San Francisco, California. (Aug., 1905).

Dewar, J. F., 2, St. Patrick's Square, Edinburgh. (Orig. Mem).

De Yarburgh-Bateson, The Hon. Lilla, Heslington, York. (June, 1903).

Dunleath, The Lady, Ballywalter Park, Ballywalter, co. Down. (Nov., 1901).

Dutton, Mrs., Bank Cottage, Walton, Stone, Staffs. (Nov., 1901).

FARRAR, Rev. C. D., Micklefield Vicarage, Leeds. (Dec,, 1904).

FASEY, WILLIAM R., The Oaks, Holly Bush Hill, Snaresbrook. (Jan., 1903).

FEILDING, Miss MARGARET, Broome Park, Betchworth, Surrey. (June, 1903).

FILLMER, H. R., 52, Ship Street, Brighton. (Orig. Mem.)

FINN, FRANK, B.A., F.Z.S., M.B.O.U., 29, Chalcot Crescent, Primrose Hill, N.W. (Sept., 1903).

FORTLAGE, HENRY E., Holbrook, Redhill, Surrey. (May, 1902).

FOSTER, WILLIAM HILL, 164, Portland Street, Southport. (Nov., 1901).

GERRARD, JOHN, M.B.O.U., Worsley, Manchester. (June, 1905).

GIBBONS, Miss M., Boddington Manor, Cheltenham. (Dec., 1904).

GOOD, Mrs., Southampton Cottage, Ashley Down, Bristol. (Oct., 1905).

GOODCHILD, H., M.B.O.U., 66, Gloucester Road, Regent's Park, N.W. (July, 1903).

GORRINGE, The Rev. REGINALD E. P., 89, Cromwell Road, Peterborough. (Dec., 1902).

GREENE, W. T., M.A., M.D., F.Z.S., Gt. Northern Road, Dunstable, Beds. (July, 1903).

HALLIWELL, J., M.R.C.V.S., 11, Westbourne Grove, West Kirby. (March, 1903).

HARDING, W. A., F.Z.S., Histon Manor, Cambridgeshire. (Dec., 1903).

HARMAN, J., Tubbs Road, Harlesden, N.W. (Feb., 1903).

HARRISON, J. H., 18, East Beach, Lytham. (Dec., 1901).

HATCHER, J. F., 168, Upper Thames Street, E.C. (June, 1903).

HAWKINS, L. W., Estrilda, New Clive Road, West Dulwich. (Orig. Mem.).

HEALEY, Mrs., 12, Rosetti Gardens Mansions, Cheyne Walk, S.W. (Feb., 1903).

HODGE, Prof. C. F., Ph.D., Clark University, Worcester, Mass. (Nov., 1905).

HOLLINS, Miss, Greyfriars, Preston, Lancashire. (Feb., 1906).

HOLLINS, J. T., 7, Lowther Arcade, Harrogate. (May, 1903).

HOPKINSON, Miss E. M., 45, Sussex Square, Brighton. (Sept., 1902).

HOPKINSON, EMILIUS, M.A., M.B. Oxon., D.S.O., 45, Sussex Square, Brighton. (Oct., 1901).

HORTON, L. W., Hill House, Compton, Wolverhampton. (Sept., 1902).

HOULTON, CHARLES, Laburnum House, Denton's Green, St. Helen's, Lancs. (Nov., 1901).

Howe, Frank, 65, Thomas Street, Wellingborough, Northamptonshire. (Feb., 1902).
Howe, Mrs. James, Moss Lodge, Ashton-under-Lyne, Lancs. (July, 1903).
Hubbard, Mrs. D. L., Casa Sta. Monica, Bordighera, Italy. (Jan., 1905).
Hume, James, Hepscott, Morpeth. (June, 1903).
Humphrys, Russell, Southorough, Bickley. (July, 1902).

Ide, Harry, L.D.S.R.C.S. Eng., Eden Street, Kingston-on-Thames. (June, 1903).

Jardine, Miss E. L., Lady Superintendent, Freed Slaves' Home, Zungaree, Northern Nigeria. (Dec., 1902).
Jeffs, W., Bronwen Villa, Victoria Road, Darlaston. (Oct., 1904).

Kestermann, Herr Hermann, 3, Südstrasse, Greig i. V., Germany. (Feb., 1903).
Keytel, P. C., Brighton Castle, Mouille Point, (P. O. box 633), Cape Town. (June, 1903).

Laffan, Mrs. de Courcy, 119, St. George's Road, S.W. (March, 1905).
Lane, The Hon. Mrs., King's Bromley Manor, Lichfield. (April, 1905).
Lane, Miss, The Deanery, Rochester. (April, 1905).
Leverkühn, Aulic Counsellor Dr. Paul, M.D., C.M.Z.S., Director of Scientific Institutions, The Palace, Sophia, Bulgaria. (July, 1903).
Little, Miss C. Rosa, Baronshalt, The Barons, East Twickenham. (Nov., 1902).
Londesborough, The Dowager Countess of, 17, Norfolk St., Park Lane, W. (May, 1905).

Martin, T. J., High Street, Lowestoft. (Nov., 1903).
Master, G., M.B., B.C., 86, Guildhall St., Bury-St.-Edmunds. (Nov., 1903).
Mellor, Mrs., Fair Lawn, Lytham, Lancs. (July, 1904).
Miller, Mrs. K. Leslie, 27, Belgrave Road, S.W. (Jan., 1904).
Mitchell, P. Chalmers, M.A., D.Sc., F.Z.S., M.B.O.U., Secretary to the Zoological Society of London, 3, Hanover Square, London, W. (April, 1905).
Momber, A. R. T., La Tuinia, San Remo. (Oct., 1904).
Mortimer, Mrs., Wigmore, Holmwood, Surrey. (Nov., 1901).
McDonagh, J. E. R., M.R.C.S., L.R.C.P., F.Z.S., F.L.S., 13, Greencroft Gardens, S. Hampstead, N.W. (Jan., 1903).

McKill, A. R., Ashfield Lodge, Thorner, near Leeds. (Dec., 1902).

McMath, Wm., M.B., 6, Camden Place, Cork. (Jan., 1904).

Newbould, T., Oakdene, Linthorpe, Middlesborough. (Dec., 1902).

Newman, T. H., F.Z.S., M.B.O.U., Newlands, Harrowdene Road, Wembley, Middlesex (July, 1903).

Northbourne, The Lady, Betteshanger, Eastry, S.O., Kent. (May, 1905).

Oakey, W., 34, High Street, Leicester. (Orig. Mem.)

Oberholser, Harry C., 1349, Harvard Street, Washington, D.C., U.S.A. (Dec., 1903).

O'Reilly, Nicholas S., 9, Royal Crescent, Ramsgate, Kent. (Orig. Mem.)

Osbaldeston, William, 11, Stephenson Terrace, Preston, Lancs. (Orig. Mem.)

Page, W. T., F.Z.S., 6, Rylett Crescent, Shepherd's Bush, W. (May, 1905).

Partridge, Mrs., 6, Hyde Vale, Greenwich. (Dec., 1905).

Perkins, E., Chester Hill, Woodchester, Gloucestershire. (Feb., 1903).

Perreau, Capt. G. F., 2/4 Gurkha Rifles, Bakloh, Punjab, India. (Dec., 1903).

Perring, C. S. R., 4, Cambridge Villas, High Street, Teddington. (Oct., 1902).

Perryman, C. W., Bifrons, Farnborough, Hants. (July, 1902).

Picard, H. K., 10, Sandwell Crescent, W. Hampstead, N.W. (Oct., 1901).

Pickles, W. H., Stoneyhurst, Morecombe, Lancashire.

Pond, Mrs. T. A., 174, Upper Parliament Street, Liverpool. (Nov., 1902).

Porteous, James T., Deneholme, Hexham. (Sept., 1903),

Restall, J. A., 82, Cambridge Street, Birmingham. (Nov., 1903).

Rice, Capt. G., Clayquhat, Blairgowrie, N.B. (July, 1902).

Richard, E., Hotel Metropole, Brighton. (Nov., 1901).

Roberts, Norman B., West Retford Cottage, Retford, Sheffield. (Nov., 1901).

Rogerson, Mrs., Fleurville, Cheltenham. (Feb., 1903).

Rotch, C. D., 3, Beach Lawn, Waterloo, near Liverpool. (Orig. Mem.)

ROW, C. H., Irene House, Cornard Road, Sudbury. (Dec., 1905).

RYCROFT, MARK E., 8, Park Street, Wakefield. (April, 1903).

SALT, THOMAS, L.R.C.P., Yiewsley, Saltley, Birmingham. (July, 1903).

SAVAGE, A., 3, Rue Bihorel, Bihorel, Rouen, France. (Dec., 1901).

SAYWELL, Miss THEODORA, The College, Bromsgrove, Worcestershire. (Oct., 1902).

SCOTT, Professor W. E. D., 341, Nassau Street, Princetown, New Jersey, U.S.A. (Sept., 1902).

SETH-SMITH, DAVID, F.Z.S., M.B.O.U., 14, Canning Road, Addiscombe. (Nov., 1903).

SMITH, H. B., Grangefield, Park Road South, Birkenhead. (Orig. Mem.)

SMITHWICK, Capt. W. F., Youghal House, Nenagh, Ireland. (Dec., 1902).

SPEED, HEDLEY, 12, Victoria Park, Bangor. (Nov., 1901).

STOREY, JAMES, 7, Blenheim Terrace, St. John's Wood, N.W. (Orig. Mem.)

SUGGITT, R., Suggitt's Lane, Cleethorpes. (Dec., 1903).

SWAN, J. A., 87, Lower Kennington Lane, S.E. (Oct., 1901).

SWAYSLAND, W., 47, Queen's Road, Brighton. (Orig. Mem.)

TANNER, F. L., L.D.S.R.C.S., Eng., Vauvert House, Guernsey, (Feb,, 1904).

THWAITES, GEORGE, Dunedin Villa, Northampton Road, Market Harborough. (Feb., 1903).

TOMASSI BALDELLI, La Contessa G., 4, Via Silvio Pellico, Florence, Italy. (Dec., 1901).

TOWNSEND, S. M., 3, Swift Street, Fulham, S.W. (Orig. Mem.)

TOYE, Mrs. M., Stanhope, Bideford, N. Devon (Nov., 1901).

TRAVERS, Miss ANNETTE, St. Cloud, Beaupare, co. Meath. (Dec., 1903).

TRECHMANN, Dr. MAX M., 131, St. George's Road, S.W. (Dec., 1904).

TRUE, WILL, 74, Comeragh Road, London, W. (Jan., 1905).

VERE, The Very Rev. Canon, 21a, Soho Square, London, W. (Nov., 1903).

VERNON, Mrs., Toddington Park, Dunstable, Beds. (Oct., 1905).

WALLACE, JAS. SIM, D.Sc., M.D., C.M., 30a, Wimpole Street, London, W. (Jan., 1904).

WARDALE, H., Willington House, Willington Quay, Northumberland. (May, 1903).

WEBB, W., 1, North Road, Surbiton. (Jan., 1904).

WHEELER, ALFRED, 2, West View Terrace, Droitwitch Road, Worcester. (Sept., 1903).

WHITTAKER, T. H., Ravensmere, Marine Drive, Ansdell, Lytham, Lancs. (Dec., 1903).

WIENER, A. F., F.Z.S., 6, Northwick Terrace, Maida Vale, N.W. (Nov., 1901).

WILDE, Miss MAUDE, Little Gaddesden, Berkhampstead. (Nov., 1901).

WILMOT, The Rev. RICHARD H., Poulton Vicarage, Fairford. (Nov,, 1902).

WILSON, Miss F. M., 34, Charrington Street, London, N.W. (March, 1906).

WILSON, T. N., M.A., Oak Lodge, Bitterne, near Southampton. (Jan., 1902).

WINCHILSEA and NOTTINGHAM, The Countess of, Harlech, Merioneth. (June, 1903).

WOOLSTON, T., 22, Wilson Street, Middlesborough. (Oct., 1903).

WROTTESLEY, The Hon. WALTER B., F.Z.S., 8, Herbert Crescent, S.W. (Dec., 1902).

YALLOP, F. J., 85, Prince of Wales Road, Norwich. (July, 1902).

March, 1906.

Roll of Associates.

BULLOCK-WEBSTER, A., King's Close, Barnstaple. (Oct., 1902).

CURTIS, Mrs. D. W., Market Place, Stowmarket. (Sept., 1902).

GORDON, Miss, 57, Burlington Road, Bayswater, W. (May, 1904).

HALLIDAY, CHARLES, Bridge Street, Banbridge, co. Down. (June, 1903).

HARRIS, CHARLES, 15, Clayton Street, Newcastle-on-Tyne. (Oct., 1902).

HARTON, Miss E., 53, Goldhurst Terrace, South Hampstead, N.W. (Nov., 1903).

HAWKE, The Hon. M. C., Wighill Park, Tadcaster. (Nov., 1902).

HENTSCH, W. J., Douglas Villa, Acacia Grove, New Malden, Surrey. (Jan., 1904).

HINCKS, Miss E. M., Baron's Down, Dulverton. (Jan., 1903).

HOWMAN, Miss, Sherwood, Essex Grove, Upper Norwood, S.E. (Nov., 1901).

HULTON, Mrs., Hulton Hall, Bolton-lea-Moors. (June, 1903).

HYDE & Co., Ltd., R., Harold Street, Camberwell, S.E. (May, 1902).

LEE, Miss CONSTANCE, Budleigh, Salterton, R.S.O., Devon. (Dec., 1904).

LOCK, Miss M., 82, Southwold Mansions, Elgin Avenue, Maida Vale. (Feb., 1906).

MARSHALL, Mrs., Ashley Warren, Walton-on-Thames. (Dec., 1903).

MARTIN, Mrs. HORACE, 13, Hillside, Wimbledon, Surrey. (May, 1904).

MCADAM, Mrs. J., 24, Cambridge Terrace, Hyde Park, W. (June, 1903).

MITCHELL, H., Duchy Court, Harrogate. (Sept., 1903).

MOORE, Mrs. G. W., Moore House, Finchley Road, St. John's Wood, N.W. (Oct., 1903).

MOSS, GEORGE, 51, Wellington Street, Loughborough. (Nov., 1902).

NICHOLSON, Miss M. E., Meadow Croft, Upton, Birkenhead. (June, 1903).

NORTH, JOSIAH, 314, Oxford Road, Reading. (Sept., 1904).

PANTON, Miss MAY, 14, King Edward's Road, Oldfield Park, Bath. (June, 1903).

PENGELLEY, CHARLES H. C., Hollywell, St. Ives, Hunts. (Oct., 1903).

RUDKIN, F. H., Belton, Uppingham. (March, 1906).

SEVASTOPULO, Mrs. G. D., 147, Gloucester Terrace, Hyde Park, London, W. (Oct., 1901).

SHARP, H. S., Heathfield, Bingley, Yorks. (Nov., 1901).

SLATTER, A. C., 17, Commercial Street, Hereford. (July, 1903).

SNELL, S. H., M.D., Glenshee Lodge, 261, Trinity Road, Wandsworth, S.W. (April, 1904).

TWEED, H. R. B., B.A. (Oxon.), Laindon Frith, Billericay. (June, 1903).

WARD, The Hon. Mrs. SOMERSET, Carrowdore Castle, Donaghadee, co. Down. (Oct., 1905).

WILSON, H. R., Anglehaın, Rosebery Crescent, Newcastle-on-Tyne. (Dec., 1903).

WRIGHT, Mrs., New Brook, Atherton, Manchester. (Oct., 1904).

RULES.

1. The objects of "THE FOREIGN BIRD CLUB" shall be the mutual encouragement and assistance of the members and associates in the keeping, breeding, and exhibiting of foreign birds, and the improvement of shows in regard to them.

2. The Club shall be composed of members and associates. Every member shall pay an entrance fee of 2/6 and an annual subscription of 10/-. Every associate shall pay an entrance fee of 2/6 and an annual subscription of 5/-. Associates shall have such of the privileges of members as the Council shall from time to time direct. Subscriptions shall be due and payable in advance on the 1st of March in each year. If any member's or associate's subscription shall be more than three months overdue he shall be suspended from all the benefits of the Club, and if more than nine months overdue, notice of his having ceased to be a member or associate of the Club, and of the cause, may be published in the Notices to Members; and on such notice being published he shall cease to be a member or associate accordingly, but his liability for the overdue subscription shall continue.

3. New members shall be proposed in writing by a member of the Club and new associates by either a member or an associate: and the name and address of every person thus proposed, with the name of the person proposing him, shall be published in the Notices to Members. Unless the candidate shall, within fourteen days after the publication of his name, be objected to by at least two members, he shall be duly elected. If two or more members lodge with either of the Secretaries objections to any candidate he shall not be elected, but the signature to the signed objections must be verified by the Scrutineer. The Secretaries and the Scrutineer shall not disclose the names of the objectors. Associates desirous to become members shall go through the same form of election as other candidates but shall not pay an entrance fee.

4. Any member or associate wishing to resign at the end of the current year of the Club shall give notice of his intention to one of the Secretaries before the 1st of February, and in default of such notice he shall be liable for the following year's subscription.

5. The officers of the Club shall be elected from the members and shall consist of a President, one or more Vice-Presidents, an Auditor, a Scrutineer, one or more Secretaries, a Treasurer, a Council of twelve members, and such number of Judges as shall from time to time be determined by the Council. The Secretary or Secretaries and the Treasurer shall be ex-officio members of the Council. The Secretary or Secretaries, the Treasurer, the Council, and the judges shall be elected annually by the members in manner hereinafter provided. The other officers shall be elected annually by the Council immediately after their own election.

6. The election of the Secretary or Secretaries, Treasurer, Council, and Judges shall take place every year between the 15th of January and the 5th of February. The Secretaries shall ascertain which of the members are willing to stand for election to office, and shall send to each member of the Club, on or about the 15th of January, a voting paper containing a list of all such members, showing the offices for which they are respectively seeking election. Each member shall make a cross (x) opposite the names of those for whom he desires to vote, and shall sign the paper at the foot and send it in a sealed envelope to the Scrutineer, so that he may receive it before the 5th of February. The Scrutineer shall prepare a return of the officers elected, showing the number of votes recorded for each candidate, and send it to one of the Secretaries for publication in the Notices to Members for February. The Scrutineer shall not reveal to any person how any member shall have voted. In the event of an equality of votes the President shall have a casting vote.

7. Dealers in birds shall not be eligible for election to any office in the Club, except that of Judge. For the purpose of this rule any member who habitually buys birds with the intention of selling them again shall be deemed a dealer in birds. Before the annual election of officers, the Secretaries shall submit to the Council the list of members willing to stand for election to the Secretaryship, the Treasurership, and the Council, and the Council shall remove from the list the name of any candidate who shall be, in the opinion of the Council, a dealer in birds within the meaning of this rule. The decision of the Council, or of any Committee to whom the Council shall delegate its powers under this rule, shall be final. When a dealer is proposed as a member of the Club, the fact of his being a dealer shall be stated in the Notices to Members.

8. It shall be lawful for the Council to delegate any of its powers to a Committee.

9. The Council may appoint an Arbitration Committee which may decide questions at issue between members and associates when requested to do so by both parties. Any decision of such Committee shall be final. Except to the extent permitted by this rule the Club and its officers shall decline to concern themselves with disputes between members.

10. The Council shall have power to alter and add to the Rules, but shall give to the members notice of any proposed alteration or addition, and in the event of six members objecting thereto within fourteen days the proposed alteration or addition shall be submitted to the votes of the members. Failing such objection the alteration or addition shall date from its adoption by the Council.

11. The Council shall have power to expel any member or associate at any time.

12. Neither the office of Scrutineer nor that of Auditor shall be held for two consecutive years by the same person. The Scrutineer shall not be a candidate at any election at which he acts as Scrutineer.

13. If any office becomes vacant at any time other than at the end of the current year of the Club, the Council shall have power to nominate any member to fill the vacancy.

14. The decision of the majority of the Council shall be final and binding on the Club, but a resolution passed by the Council shall not be acted upon unless there be an absolute majority of the Council (and not merely of those voting) in its favour.

NOTICES.

It is hoped that Members and Associates will remember to send in photographs of birds and aviaries for consideration by the Magazine Committee, and also their literary contributions. It must not be forgotten that we depend only upon our own people to keep the Magazine going, and as in the future my time will be too much occupied to allow me to contribute as much as hitherto, we shall have to issue smaller numbers unless more papers are sent in than there are at present. This would be a great pity in face of the improvements we have effected in the form of the Magazine.

Last year no appeal was made to the members to help in the production of the illustrations, a few members of the Council and Staff taking the expenses not provided for by the members' subscriptions on their own shoulders. Two of the plates indeed were the absolute gift of two of the Council, and the cost of the drawings of all has been defrayed by private generosity. The cost of these plates is very considerable, amounting to several pounds each, and they are of a good deal more value than is represented by what we individually pay for our Magazines.

It is therefore proposed to open a fund to assist in this enhancement of the value of *Bird Notes*, the smallest contributions to which will be welcomed.

The following sums have already been sent in:

Mr. Castle-Sloane	£2 10 0
Mr. Webb	0 10 6
Mrs. Miller	4 10 0
The Editor	1 1 0
	£8 11 6

W. Geo. Creswell,

March 15*th*, 1906. *Hon. Editorial Secretary.*

NEW MEMBERS ELECTED.

ARONSTEIN, MARKS, 30, Grand Parade, Cork.
WILSON, Miss F. M., 34, Charrington Street, London, N.W.

NEW ASSOCIATE ELECTED.

RUDKIN, F. H., Belton, Uppingham.

PROPOSED FOR ELECTION AS MEMBERS.

DOBBIE, JOHN, Waverley Works, Leith, N.B.
By Dr. CRESWELL.
EBRILL, WM., 14, Victoria Terrace, Limerick.
By Mr. GOODCHILD.

◆

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

On Sale—Six Norwich cock Canaries in full song, 1905 birds. Some buff, others ticked.

Mrs. ASKHAM, "Merivale," Cranes Park, Surbiton.

For Sale—Cock Cockatiels 4/- each, Rosella hens 15/- each, cock Rosella 15/-. All 1905 aviary bred. *Wanted*—Red-crested Cardinal and Zebra-finch hens.

J. HUME, Hepscott, Morpeth.

POST-MORTEM EXAMINATIONS.

The conditions upon which these will be made by Dr. CRESWELL, Eden Lodge, Kingston-on-Thames, are as follows.

(1) The birds must be sent IMMEDIATELY after death.

(2) They *must* be packed in a box.

(3) *The letter accompanying them must* NOT *be placed in the box along with the birds.*

(N.B. Unless the above conditions are complied with the package will be destroyed without examination).

(4) The letter must detail *as far as possible* all particulars as to (*a*) date of death,
(*b*) length of illness,
(*c*) symptoms of illness,
(*d*) lodgement and feeding of birds, and
(*e*) especially as to whether egg food or inga seed has been given.

(5) The work will be done gratuitously, and a report published in "Bird Notes," but *under no circumstances whatever will a report be sent by post unless a fee of* 2/6 *accompanies the letter and bird.* Pressure of work compels Dr. Creswell to make this an invariable rule, and it applies to all members whether they are personally acquainted with him or not.

BOUND VOLUMES OF "BIRD NOTES."

Volume I. is out of print. The Publishers are occasionally able to get second-hand copies.

Of Volume II. there remain only a few copies,		
	to Members and Associates	7/6
	to others	10/6
,, III. *with hand-coloured plates*		
	to Members and Associates	10/6
	to others	15/-
,, ,, *with plates uncoloured*		
	to Members and Associates	7/6
	to others	10/6

Cases for binding Vols. I., II., III. and IV. may be had, price 1/2 each post free.

Application for Bound Volumes and cases must be made to the Publishers.

The Foreign Bird Club.

IMPORTANT NOTICES.

By the kindness of Mr. Fillmer I am able to announce that a new copy of "The Natural History of Animals," by Ainsworth Davis, (4 vols., Roxburgh binding, price £3 3s. 0d., 1905), will be presented to the Member or Associate, (other than myself), who introduces the greatest number of new Members and Associates during the current year. The conditions are that the new brethren must have actually paid their entrance fees and subscriptions, and that at least six Members shall have been introduced by the winner of the book, two Associates counting as one Member. For instance, seven Members and two Associates would count as eight Members, and would therefore just beat five Members and five Associates.

I must once more remind our subscribers that it will be well for them to send in photographs for consideration, as otherwise several numbers will this year be pictureless. The Committee has one coloured plate in hand, and Mr. Goodchild has promised to do two more, but it is intended that these plates shall appear only in alternate issues. The need for immediate photographs will thus be apparent.

The following sums have been sent in towards the illustration fund, to which even the smallest contribution will be welcomed.

Mr. Dart	£1	1	0
Mr. Horton	1	0	0
	£2	1	0

May I remind contributors that all matter intended for publication should be written on only one side of the paper?

W. GEO. CRESWELL,

April 15*th*, 1906. *Hon. Editorial Secretary.*

NEW MEMBERS ELECTED.

Dobbie, John, Waverley Works, Leith, N.B.
Ebrill, Wm., 14, Victoria Terrace, Limerick.

PROPOSED FOR ELECTION AS MEMBERS.

Mrs. Maskew, S. Paul's Vicarage, Peterborough.
By the Rev. R. E. P. Gorringe.

The Hon. and Rev. Canon Dutton, Bibury, Fairford.

King Alfred's School, The Librarian of, Wantage, Berks.
By Dr. Creswell

CHANGES OF ADDRESS.

Miss Evelyn J. Curtis, Salthrop House, Wroughton, Swindon.

The Rev. R. E. P. Gorringe, Maxey Vicarage, Market Deeping, Northants.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

On Sale—Perfectly finger tame Bey Bay Parrot, feeds from mouth, child's pet, acclimatised and healthy, 40/- or exchange warranted healthy foreign finches.
Mrs. Warren Vernon, Toddington Park, Beds.

MAY, 1906.

The Foreign Bird Club.

NOTICES TO MEMBERS.

NEW MEMBERS ELECTED.

MASKEW, Mrs., St. Paul's Vicarage, Peterborough.
DUTTON, The Hon. and Rev. Canon, Bibury, Fairford.
KING ALFRED'S SCHOOL, The Librarian of, Wantage, Berks.

PROPOSED FOR ELECTION AS MEMBERS.

GRAY, HY., M.R.C.V.S., 23, Upper Phillimore Place,
London, W.
SKILL, J. M., M.R.C.S., L.R.C.P., Norbiton Avenue,
Kingston-on-Thames.
By Dr. CRESWELL
LAMB, E. J., 10, Knights Park, Kingston-on-Thames.
By Dr. WALLACE.

The following contribution towards the Illustration Fund has been kindly sent in by a member:

"Grasshopper" .. .. .. 5/-.

W. GEO. CRESWELL,
May 15*th*, 1906. *Hon. Editorial Secretary.*

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

On Sale—Cock Greenfinch-Canary, 12/6, and a Green Singing Finch, believed to be a cock. Particulars on application.
Mrs. MCADAM, 24, Cambridge Terrace, Hyde Park.

BOUND VOLUMES OF "BIRD NOTES."

Volume I. is out of print. The Publishers are occasionally able to get second-hand copies.

Of Volume II. there remain only a few copies,	
to Members and Associates	7/6
to others	10/6
Volumes III. & IV. *with hand-coloured plates*	
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to others	15/-
,, ,, *with plates uncoloured*	
to Members and Associates	7/6
to others	10/6

Cases for binding Vols. I., II., III. and IV. may be had, price 1/2 each post free.

Application for Bound Volumes and cases must be made to the Publishers.

The Foreign Bird Club.

NOTICES TO MEMBERS.

In the "Bird Market" will be seen an advertisement which should prove a source of great convenience to many members when away from home for their holidays. From testimonials written by ladies whose feathered pets she has taken care of, and which I now have before me, I gather that Miss Lock can have birds entrusted to her care with every confidence that they will be thoroughly looked after and treated according to the owners' wishes. Her charges are moderate.

Will members and associates please refer to the "Notices" in the April number?

W. GEO. CRESWELL,
June 15*th*, 1906. *Hon. Editorial Secretary.*

NEW MEMBERS ELECTED.

GRAY, HY., M.R.C.V.S., 23, Upper Phillimore Place, London, W.
SKILL, J. M., M.R.C.S., L.R.C.P., Norbiton Avenue, Kingston-on-Thames.
LAMB, E. J., 10, Knights Park, Kingston-on-Thames.

PROPOSED FOR ELECTION AS MEMBERS.

MURRAY, IVAN D., Toddington Park, Dunstable, Beds.
By Mrs. VERNON.

STROUD, E. LIONEL, F.R.C.V.S., 29, Spring Street, Paddington, W.
HALL, Miss A. E., 2, Park Place Villas, Maida Vale, W.
By Mr. GRAY.

KEULEMANS, J. G., 3, Uphall Road, Ilford, Essex.
By Dr. CRESWELL.

CHANGES OF ADDRESS.

Mrs. PARTRIDGE, Loxia, Richmond Road, Worthing.

Dr. D'EVELYN, 2103, Clinton Avenue, Alameda, California,
U.S.A.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

Lady, experienced in care of birds, undertakes charge of them during absence of owners.
Miss LOCK, 82, Southwold Mansions, Maida Vale.

Wanted—Gouldian, Parson, Alario, and Melodious Finches; also various Weavers; if healthy, out of colour not objected to. Mrs. VERNON, Toddington Park, Dunstable, Beds.

BOUND VOLUMES OF "BIRD NOTES."

Volume I. is out of print. The Publishers are occasionally able to get second-hand copies.

Of Volume II. there remain only a few copies,
to Members and Associates - - - 7/6
to others - - - - - - 10/6

Volumes III. & IV. *with hand-coloured plates*
to Members and Associates - - 10/6
to others - - - - - - 15/-

,, ,, *with plates uncoloured*
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to others - - - - - - 10/6

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The Foreign Bird Club.

NOTICES TO MEMBERS.

In accordance with the precedent of former years there will be no issue of *Bird Notes* in August, and no *post mortem* examinations will be made during that month, except in special cases where a report by post is desired.

Mr. Cushny has kindly sent 10/- towards the Illustration Fund, which, I may remind the Members, stands in need of some help.

W. GEO. CRESWELL,
July 15*th*, 1906. *Hon. Editorial Secretary.*

NEW MEMBERS ELECTED.

MURRAY, IVAN D., Toddington Park, Dunstable, Beds.
STROUD, E. LIONEL, F.R.C.V.S., 29, Spring Street, Paddington, W.
HALL, Miss A. E., 2, Park Place Villas, Maida Vale, W.
KEULEMANS, J. G., 3, Uphall Road, Ilford, Essex.

PROPOSED FOR ELECTION AS MEMBER.

MATHIAS, H. W., F.R.H.S., Doone Cottage, Thames Ditton.
By Dr. CRESWELL.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

Wanted—Hen Orange-cheek Waxbill, cock Avadavat, hen Diamond Sparrow, cock Cordon bleu. Acclimatised.
Mrs. WARREN VERNON, Toddington Park, Beds.

BOUND VOLUMES OF "BIRD NOTES."

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(N.B. Unless the above conditions are complied with the package will be destroyed without examination).

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- (*c*) symptoms of illness,
- (*d*) lodgment and feeding of birds, and
- (*e*) especially as to whether egg food or inga seed has been given.

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The Foreign Bird Club.

NOTICES TO MEMBERS.

Those members who have recently sent birds for examination and do not find a report on the same in this issue must, I am afraid, blame themselves for not reading the notices given in this column last month.

In order to help the Illustration fund it has been decided to offer for sale a strictly limited number of the *hand-coloured* plates which have appeared in the Magazine. They are uncut and therefore suitable for framing or the portfolio; I should advise members to take early advantage of the offer, since they will never again be likely to have a chance of obtaining plates of this character. There are two sets, (6 in each), price 5/- the set: particulars on application to the undersigned.

W. GEO. CRESWELL,
Sept. 15th, 1906. *Hon. Editorial Secretary.*

ILLUSTRATION FUND.

The Editor of *Cage Birds*	£2 2 0

NEW MEMBER ELECTED.

MATHIAS, H. W., F.R.H.S., Roedown House, Medstead, Hants.

CHANGES OF ADDRESS.

A. AITCHESON, Burseldon, Garvis Road, Bournemouth.
Dr. CLARKE, Oakfield, Warlingham, Surrey.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

Aviary-bred Budgerigars, two pairs and one odd cock, in lovely plumage: also cock Magpie Mannikin: 5/- each, 10/- pair, or exchange small foreigners.

Lovely hand-reared tame cock Bullies and Goldies, feed from hand; will come out of cage, bathe and return. Single cocks 10/-, pair of Bullies 15/-, Goldies 7/6.

Wanted, a hen Diamond Sparrow.

Mrs. VERNON, Toddington Park, Beds.

Cockateels: Two cocks and one hen, outdoor aviary bred, able to fly, and healthy, 4/6 each.

Lady HULTON, Hulton Park, Bolton-le-Moors.

White-backed Piping Crow, privately imported five years ago. Just over moult. Price 45/-. Dr. CRESWELL.

◆

THE FORTHCOMING SHOW SEASON.

The Show Committee have granted the Club's medals to the following Shows. Any further medals granted will be duly announced.

Members are reminded that they *must* put "F. B. C." after each entry.

Great Harwood. Open Show. October 12*th &* 13*th*. Classification for three classes for foreign birds. 1 Bronze Medal. Judge, Mr. J. H. Payne. Schedules from Mr. J. Sharples, 85, James Street, Great Harwood, near Blackburn.

L. C. B. A. Open Show. Royal Horticultural Hall, Westminster. October 19*th &* 20*th*. Classification and Judges under consideration. Schedules from Mr. J. Tyson, 169, Sloane Street, London, S.W.

Leeds. Open Show. October 19*th &* 20*th*. Classification for three classes for foreign birds. 1 bronze medal. Judge Mr. Bexon. Schedules from Mr. C. R. Stevenson, 19, Hartley Grove, Woodhouse, Leeds.

L. & P. O. S. Open Show. Camberwell. October 30th and 31st. Classification for eight classes for foreign birds. 1 silver and 1 bronze medal. Judge, Mr. W. Swaysland. Schedules from Mr. Lambert Brown, 64, Manor Park, Lee, S.E.

S. M. Townsend, *Hon. Exhibitional Secretary.*
3, Swift Street, Fulham, S.W.

REGULATIONS AS TO CLUB MEDALS

MADE BY THE SHOW COMMITTEE OF THE COUNCIL.

1. All Medals shall be given for POINTS, which are to be counted as follows:— C. 1, H. C. 2, and one number higher for each higher award.
2. Extra Prizes shall count for Points, and *all* entries compete, (except as provided in Rule 9).
3. Subject to special resolution of the Committee to the contrary, when two Medals are given at the same Show the second shall be for next highest points to the winner of the first.
4. Members exhibiting at Shows where Club Medals are given *must* place the initials "F. B. C." after *each* entry in the entry form, and request the Secretary to insert the same in the Show Catalogue.
5. No member shall win more than TWO medals in one season —one silver and one bronze—or more than ONE medal at the same Show.
6. No medal shall be given at any Show unless the Classification and the name of the Judge be first submitted to and approved by the Committee. Preference shall be given to Shows at which the Club's Classification is adopted and one of the Club's Judges appointed.
7. No Medal shall be given at any Show where less than THREE Classes for Foreign Birds are provided, and no Silver Medal where less than SIX Classes. The Show Committee reserve the right of waiving this number at their discretion.

8. In the case of a tie the exhibitor taking most money in prizes shall win, and if there still be a tie the exhibitor with most entries shall win.
9. Medals shall be given at OPEN SHOWS only, and points in members' classes shall not be counted.
10. No Medal shall be awarded at any Show unless at least THREE members compete.

POST-MORTEM EXAMINATIONS.

The conditions upon which these will be made by Dr. CRESWELL, Eden Lodge, Kingston-on-Thames, are as follows:

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(2) They *must* be packed in a box.

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(N.B. Unless the above conditions are complied with the package will be destroyed without examination).

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(*b*) length of illness,
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(*e*) especially as to whether egg food or inga seed has been given.

(5) The work will be done gratuitously, and a report published in "Bird Notes," but *under no circumstances whatever will a report be sent by post unless a fee of* 2/6 *accompanies the letter and bird.* Pressure of work compels Dr. Creswell to make this an invariable rule, and it applies to all members whether they are personally acquainted with him or not.

OCTOBER, 1906.

The Foreign Bird Club.

NOTICES TO MEMBERS.

In this issue is presented the Balance Sheet for last year. While the amount set forth does not quite represent the whole expenses of the year, inasmuch as two of the plates were given outright by two of our members, and the artist's fees for the rest were also defrayed by private generosity, yet the Magazine Committee may fairly be congratulated on what they produced for the money.

This year the volume will contain six coloured plates, which, together with the increased number of black and white illustrations, will entail much heavier expense than last year. It is therefore earnestly hoped that some of the members who have not yet sent a donation to the Illustration Fund, will kindly do so.

I have had a set of our plates framed and hung. The effect is so charming and so universally admired, that I am fain to urge members to avail themselves of our offer of sets while there are some still left. Five double sets have already been sold.

In April Mr. Fillmer kindly offered a three guinea book as a prize in connection with introducing new members. Has this been lost sight of?

One more item. I get several letters each week asking for advice or information, but very rarely does one contain a stamp for reply. In the aggregate this means a heavy tax, which in the future I hope my correspondents will kindly relieve me of, *by enclosing a stamped and addressed envelope if they want an answer.*

W. GEO. CRESWELL,
Oct. 15th, 1906. *Hon. Editorial Secretary.*

ILLUSTRATION FUND.

	£	s.	d.
Mr. Castle-Sloane (2nd donation)..	0	10	0
Mr. Wesley Page	1	1	0

PROPOSED FOR ELECTION AS MEMBER.

CONWAY-GORDON, Miss V., Longley House, Rochester.
By Mr. TOWNSEND.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month.

Cockatiels, (cocks), full plumage, from outdoor aviary. Fine birds, 8/- each. Miss HINCKS, Barons Down, Dulverton.

Cassell's "Canaries and Cage Birds," perfect condition, 20/-, published at 35/-. Dr. Greene's "Favourite Foreign Birds," 1/9. J. A. SWAN, 87, Lower Kennington Lane, London, S.E.

THE SHOW SEASON.

Medals have been granted to the following Shows in addition to those already announced.

Manchester. Open Show. October 26th and 27th. Classification for four classes for foreign birds. 1 Bronze Medal. Judge, Mr. G. E. Weston. Schedules from Mr. G. W. F. Lythgoe, 25, Stamford Street, Old Trafford, Manchester.

Nottingham. Open Show. November 17th and 19th. Classification for four classes for foreign birds. 1 Bronze Medal. Judge, Mr. Chas. Houlton. Schedules from Mr. G. E. Wilkinson, 9, Wellington Square, Park Side, Nottingham.

S. M. TOWNSEND, *Hon. Exhibitional Secretary.*
3, Swift Street, Fulham, S.W.

BALANCE SHEET FOR 1905-6.

Receipts.

	£	s.	d.
Members' Subscriptions, 147 @ 10/-	73	10	0
Associates' ,, 30 @ 5/-	7	10	0
Members paid up for 1904-5	1	10	0
Entrance fees	3	0	0
Trade Advertisements	4	9	6
Sales, *Bird Notes*, Bound Vols.	6	17	2
,, ,, ,, Current Numbers	3	15	9
,, Cases for *Bird Notes*	1	13	9
,, Coloured Plates	0	4	0
,, Illustration Block	0	5	6
Members' Advertisements	0	9	5
Donations: Mrs. L. Miller	5	0	0
Mr. Castle-Sloane	2	10	0
Dr. Creswell	12	0	6
Sundry	1	9	4
	£124	4	11

Expenditure.

	£	s.	d.
Balance, 1904-5	0	0	9
Printing *Bird Notes*	72	16	9
Coloured Plates	22	17	9
Blocks, etc. (black and white illustrations)	5	11	9
Bindings for *Bird Notes*	1	11	0
Medals	0	15	9
Postage	12	6	8
Straw Boards	1	0	6
Publishers' Fees	2	15	0
Sundry Expenses	0	5	0
Stationery	4	4	0
	£124	4	11

W. B. Wrottesley, *Hon. Treasurer.*

W. Geo. Creswell, *Hon. Secretary.*

Audited and found correct,

Wm. Webb, *Hon. Auditor.*

POST-MORTEM EXAMINATIONS.

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The Foreign Bird Club.

NOTICES TO MEMBERS.

NEW MEMBER ELECTED.

CONWAY-GORDON, Miss V., Longley House, Rochester.

PROPOSED FOR ELECTION AS MEMBERS.

HORSFORD, Mr. S. R., Princes Street, Cork.
By Dr. MCMATH.

MORRISON, The Hon. Mrs. MCLAREN, 3, Redcliffe Square, S.W.

WATTS, Mr. RUDOLPH J., Wilmar, Wiggenhall Road, Watford.
By Mr. S. M. TOWNSEND.

PROPOSED FOR ELECTION AS ASSOCIATE.

WITHERS, Mr. HY. B., 249, High Street, Watford, Herts.
By Mr. S. M. TOWNSEND.

CHANGE OF ADDRESS.

Mrs. GOOD, 37, Glengarry Road, East Dulwich, S.E.

Dr. MCDONAGH, St. Bartholomew's Hospital, London.

W. GEO. CRESWELL,
Nov. 15th, 1906. *Hon. Editorial Secretary.*

THE SHOW SEASON.

Medals have been granted to the following Shows in addition to those already announced.

Preston. Open Show. November 23rd and 24th. Classification for five classes for foreign birds. 1 Bronze Medal. Judge, Mr. J. H. Roe. Schedules from Mr. J. W. CLEMINSON, 58, Elmsley Street, Preston, Lancs.

Norwich. Open Show. December 1st and 3rd. Classification for five classes for foreign birds. 1 Silver Medal. Judge, Mr. P. F. Hills. Schedules from Mr. R. Roll, Auratum Cottage, 54, Cecil Road, Norwich.

S. M. TOWNSEND, *Hon. Exhibitional Secretary.*
3, Swift Street, Fulham, S.W.

POST-MORTEM EXAMINATIONS.

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DECEMBER, 1906.

The Foreign Bird Club.

NOTICES TO MEMBERS.

Since the end of the year, (Feb. 28), automatically brings about the resignation of the Council and all the other officers, it is necessary for me this month to call the attention of members at large to the fact, in order that I may receive intimations from those who may desire to stand for the vacant offices, in time to issue voting papers in the January Magazine. I may here say that Mr. Horton and myself have no intention of standing again for our respective offices of Hon. Treasurer and Hon. Editorial Secretary. Will therefore any members who may desire to fill any of the vacant positions kindly communicate with me *not later than January 1st, 1907*.

I also regret to say that I shall be unable to continue the *post mortem* examination of birds after Feb. 28 next. The Council will be glad if one of our Medical or Veterinary members will kindly consent to undertake these for the future.

I have great pleasure in mentioning that I have received from various quarters a good deal of friendly appreciation of the Magazine Committee's efforts to produce a series of illustrations sufficiently worthy of the Magazine under the adverse circumstances of a very limited income. As a practical appreciation of these efforts I have the further pleasure of announcing the following donations lately received.

Mrs. Miller (2nd donation)	..	£0 18 0
The Rev. R. E. P. Gorringe	..	0 10 0
Mr. Castle-Sloane (3rd donation)	..	6 0 0
		£7 8 0

The above contribution from Mrs. Miller represents the amount of her prize winnings at the late Horticultural Hall Show.

W. GEO. CRESWELL,

Dec. 15*th*, 1906. *Hon. Editorial Secretary.*

NEW MEMBERS ELECTED.

HOSFORD, Mr. S. R., Highfield Avenue, College Road, Cork.

MORRISON, The Hon. Mrs. McLAREN, 3, Redcliffe Square, S.W.

WATTS, Mr. RUDOLPH J., Wilmar, Wiggenhall Road, Watford, Herts.

NEW ASSOCIATE ELECTED.

WITHERS, Mr. HY. B., 249, High Street, Watford, Herts.

PROPOSED FOR ELECTION AS MEMBER.

BARRON, Mr. FRANK, Colwick Hall Hotel, Nottingham.
By Mr. TOWNSEND.

PROPOSED FOR ELECTION AS ASSOCIATE.

LYTHGOE, Mr. G. W. F., 25, Stamford Street, Old Trafford, Manchester. *By* Mr. TOWNSEND.

CHANGE OF ADDRESS.

Mr. W. H. JEFFS, 24, Avenue Road, Darlaston.

THE SHOW SEASON.

Medals have been granted to the following Show, in addition to those already announced:

Cork. January 10th & 11th. Classification for six classes for foreign birds. Two bronze medals. Judge, Mr. H. W. Battye. Schedules from Dr. McMath, 6, Camden Place, Cork.

S. M. Townsend, *Hon. Exhibitional Secretary,*
3, Swift Street, Fulham, S.W.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month

For Sale—Two Norwich Crest cock Canaries, 10/- each. One Crest hen 6/-. This year's birds, very healthy.
Miss Lock, 82, Southwold Mansion, Maida Vale.

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JANUARY, 1907.

The Foreign Bird Club.

NOTICES TO MEMBERS.

To the many Members and Associates who have asked me to reconsider my intention of relinquishing the Editorship of the Magazine, I wish to tender my hearty thanks for the kind sentiments they have expressed, and to say that it is with equal regret on my part that pressure of work in other directions will not allow me to accede to their wishes. The next number therefore—the final one of Vol. V.—will be the last issued from my study, and I take this opportunity of thanking all who have collaborated with me, and especially the Magazine Committee, for the kindness and support I have met with so consistently in what has been on my part a real labour of love.

No arrangements have yet been made as to who will take over the Editorship, but by the time these lines are in print a meeting of the Council will have been held to decide on this and other matters.

W. Geo. Creswell,
Jan. 17th, 1907. *Hon. Editorial Secretary.*

NEW MEMBER ELECTED.

Barron, Mr. Frank, Colwick Hall Hotel, Nottingham.

NEW ASSOCIATE ELECTED.

Lythgoe, Mr. G. W. F., 25, Stamford Street, Old Trafford, Manchester.

PROPOSED FOR ELECTION AS MEMBERS.

STEVENSON, Mr. B., 69, Margravine Gardens, West Kensington.
By Mr. TOWNSEND.

SOMERS, FRANK, M.R.C.V.S., 66, Francis St., Leeds.
By Dr. CRESWELL.

CHANGES OF ADDRESS.

Mr. J. NORTH, 435, Oxford Road, Reading.
Mr. H. W. MATHIAS, Clan Conal, Lee on the Solent, Hants.

THE BIRD MARKET.

The charge is one penny for every four words, including address. All advertisements must be pre-paid, and reach the Hon. Secretary by the last day of the month

Wanted.—Two copies of Vol. I. *Bird Notes*, bound preferred.
Mrs. VERNON, Toddington Park, Beds.

Through the very serious illness of Mr. OSBALDESTON, of Preston, the whole of his very valuable collection of books and magazines on Foreign and British Birds are to be sold at once. For list and particulars apply:
Mr. J. CRONKSHAW, 100, Arden Terrace, Accrington.

THE SHOW SEASON.

Medals have been granted to the following Shows in addition to those already announced:

Gateshead. One Bronze Medal.

L. & P. O. S., Open Show, Crystal Palace. February 15th to 19th. Classification for nine classes for foreign birds. One Silver and two Bronze Medals. Judges: Messrs. H. T. T. Camps and Russell Humphrys. Schedules from Mr. H. Lambert Brown, 64, Manor Park, Lee, London, S.E.

S. M. TOWNSEND, *Hon. Exhibitional Secretary,*
3, Swift Street, Fulham, S.W.

FEBRUARY, 1907.

The Foreign Bird Club.

NOTICES TO MEMBERS.

The following ladies and gentlemen have kindly consented to fill the various executive offices during the ensuing year:

Council: The Countess of Winchelsea, Mrs. E. Warren Vernon, Miss Baker, Miss Collier, the Hon. W. B. Wrottesley, G. Master, M.B., J. E. R. McDonagh, M.R C.S., H. Gray, M.R.C.V.S., and Messrs. Bamfield, Camps, Chaplin, and Murray.

Treasurer: Mrs. Miller, 27, Belgrave Road, S W.

Editorial Secretary: Mr. Wesley T. Page,
6, Rylett Crescent, Shepherd's Bush, W.

Exhibitional Secretary: Mr. S. M. Townsend,
3, Swift Street, Fulham, S.W.

Mr. Gray has also been good enough to place his able services as *Post mortem* examiner at the disposal of our members on the same conditions as have heretofore obtained in my own case.

W. Geo. Creswell,
Hon. Editorial Secretary.

Feb. 18th, 1907.

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(N.B. Unless the above conditions are complied with the package will be destroyed without examination).

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- (*c*) symptoms of illness,
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- (*e*) especially as to whether egg food or inga seed has been given.

(5) The work will be done gratuitously, and a report published in "Bird Notes," but *under no circumstances whatever will a report be sent by post unless a fee of* 2/6 *accompanies the letter and bird.* Pressure of work compels Mr. Gray to make this an invariable rule, and it applies to all members whether they are personally acquainted with him or not.

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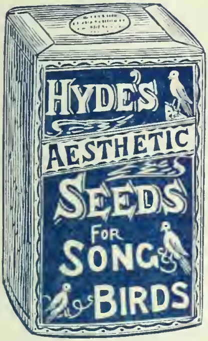
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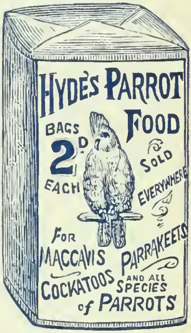
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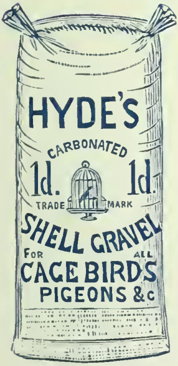
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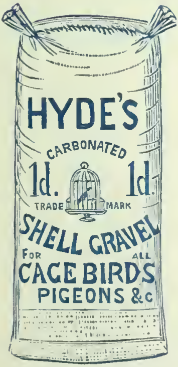

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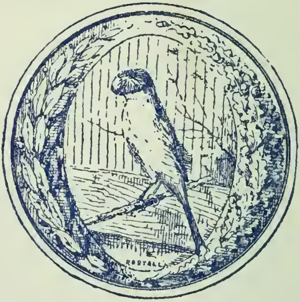

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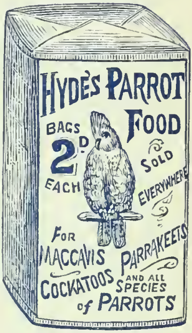
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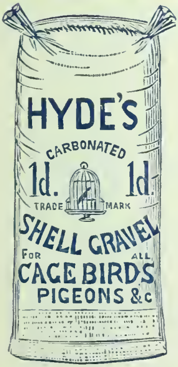
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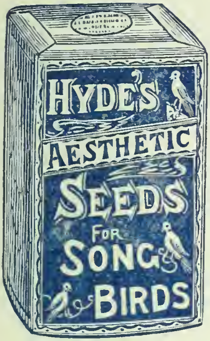
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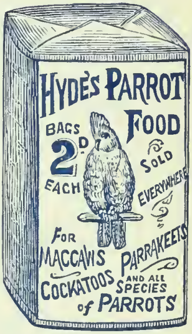
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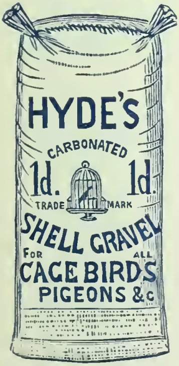
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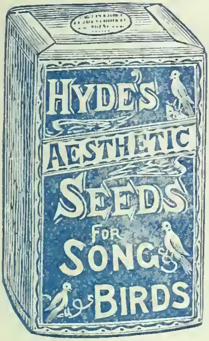
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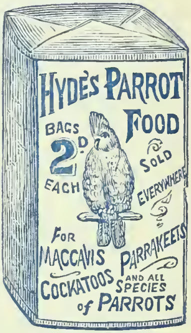
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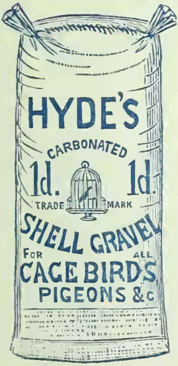
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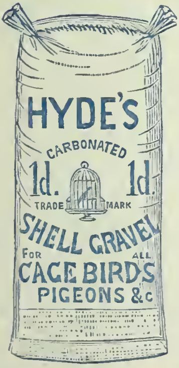
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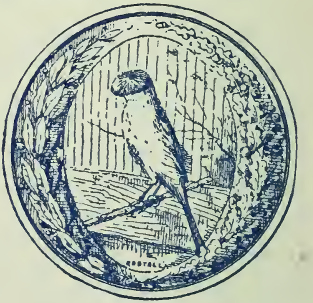

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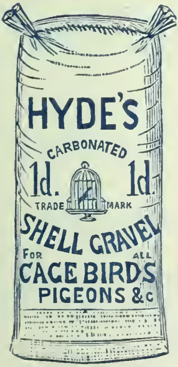
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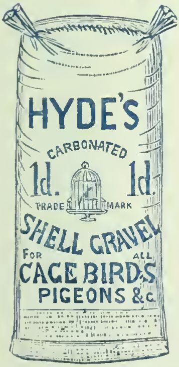
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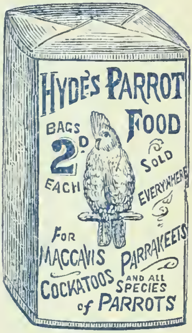
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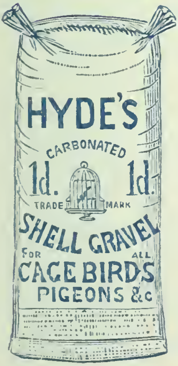
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